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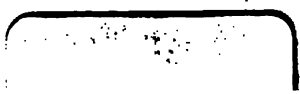
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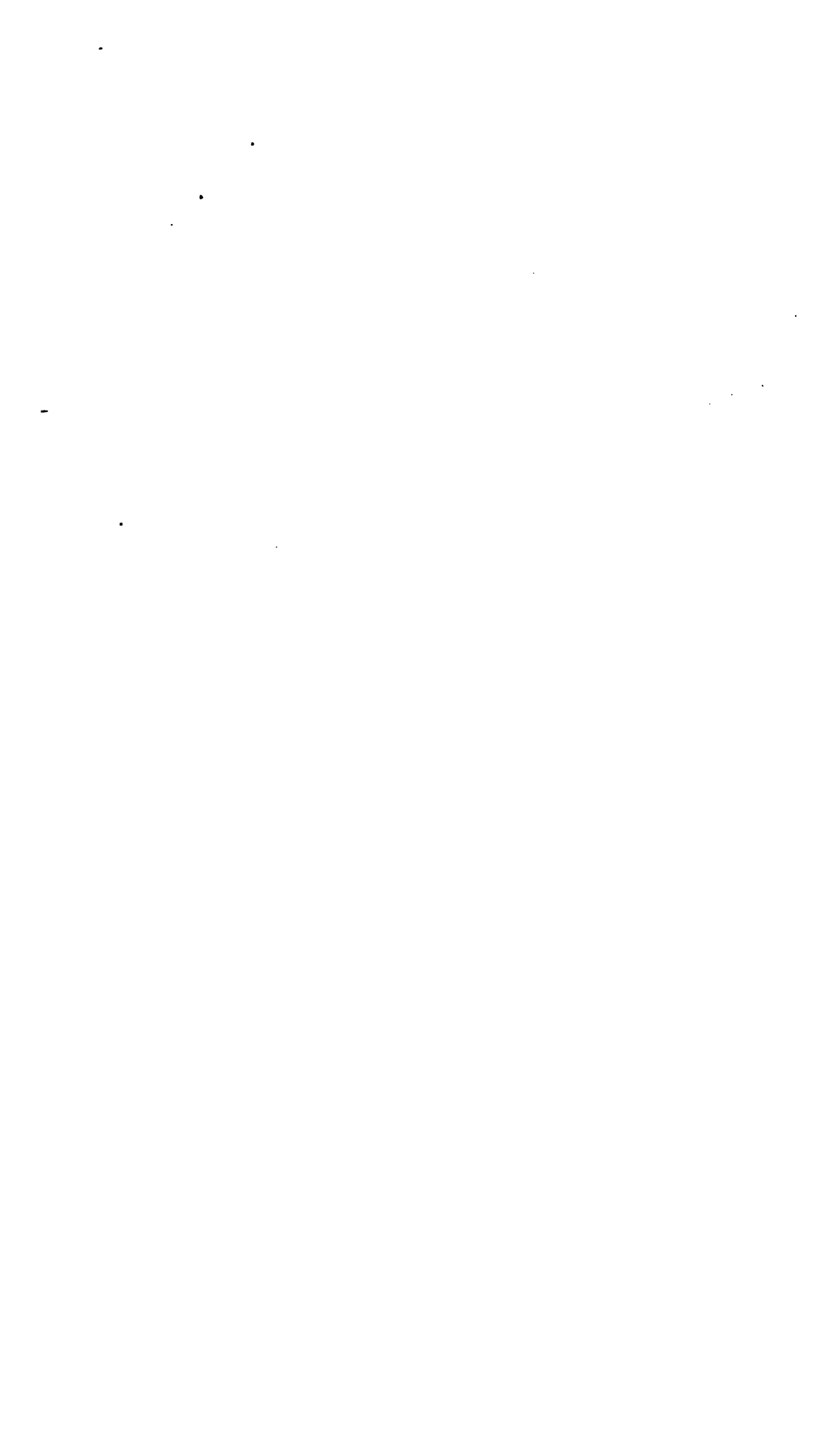
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THE ABRIDGMENT.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES

TO THE

TWO HOUSES OF CONGRESS

AT THE BEGINNING OF THE

FIRST SESSION OF THE FIFTY-SECOND CONGRESS,

WITH THE

REPORTS OF THE HEADS OF DEPARTMENTS

AND

SELECTIONS FROM ACCOMPANYING DOCUMENTS.

EDITED BY

W. H. MICHAEL.

**WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1892.**



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NOTE.

The abridgment will be found a convenient handbook by those who have occasion to refer to the President's Message and the reports of heads of departments and accompanying documents. The message and reports proper are given in full. The appendices are abridged as the subjects treated of in the reports seem to warrant. In this way about twenty thousand pages are reduced to the compass of this volume.

The abridgment is prepared and indexed in pursuance to sections 75 and 3798 of the Revised Statutes of 1878.

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MESSAGE.

To the Senate and House of Representatives:

The reports of the heads of the several Executive Departments, required by law to be submitted to me, which are herewith transmitted, and the reports of the Secretary of the Treasury and the Attorney-General, made directly to Congress, furnish a comprehensive view of the administrative work of the last fiscal year relating to internal affairs. It would be of great advantage if these reports could have an attentive perusal by every member of Congress and by all who take an interest in public affairs. Such a perusal could not fail to excite a higher appreciation of the vast labor and conscientious effort which are given to the conduct of our civil administration.

The reports will, I believe, show that every question has been approached, considered, and decided from the standpoint of public duty and upon considerations affecting the public interests alone. Again I invite to every branch of the service the attention and scrutiny of Congress.

The work of the State Department during the last year has been characterized by an unusual number of important negotiations and by diplomatic results of a notable and highly beneficial character. Among these are the reciprocal trade arrangements which have been concluded, in the exercise of the powers conferred by section 3 of the tariff law, with the Republic of Brazil, with Spain for its West India possessions, and with San Domingo. Like negotiations with other countries have been much advanced, and it is hoped that before the close of the year further definitive trade arrangements of great value will be concluded.

In view of the reports which had been received as to the diminution of the seal herds in the Bering Sea I deemed it wise to propose to Her Majesty's Government in February last that an agreement for a closed season should be made, pending the negotiations for arbitration which then seemed to be approaching a favorable conclusion.

After much correspondence, and delays for which this Government was not responsible, an agreement was reached and signed on the 15th of June, by which Great Britain undertook, from that date and until May 1, 1892, to prohibit the killing by her subjects of seals in the Bering Sea, and the Government of the United States, during the same period, to enforce its existing prohibition against pelagic sealing and to limit the catch by the Fur Seal Company upon the islands to 7,500 skins. If this agreement could have been reached earlier, in response to the strenuous endeavors of this Government, it would have been more effective ; but, coming even as late as it did, it unquestionably resulted in greatly diminishing the destruction of the seals by the Canadian sealers.

In my last annual message I stated that the basis of arbitration proposed by Her Majesty's Government for the adjustment of the long-pending controversy as to the seal fisheries was not acceptable. I am glad now to be able to announce that terms satisfactory to this Government have been agreed upon and that an agreement as to the arbitrators is all that is necessary to the completion of the convention. In view of the advanced position which this Government has taken upon the subject of international arbitration, this renewed expression of our adherence to this method for the settlement of disputes such as have arisen in the Bering Sea will, I doubt not, meet with the concurrence of Congress.

Provision should be made for a joint demarcation of the frontier line between Canada and the United States, wherever required by the increasing border settlements, and especially for the exact location of the water boundary in the straits and rivers.

I should have been glad to announce some favorable disposition of the boundary dispute between Great Britain and Venezuela, touching the western frontier of British Guiana, but the friendly efforts of the United States in that direction have thus far been unavailing. This Government will continue to express its concern at any appearance of foreign encroachment on territories long under the administrative control of American States. The determination of a disputed boundary is easily attainable by amicable arbitration, where the rights of the respective parties rest, as here, on historic facts, readily ascertainable.

The law of the last Congress providing a system of inspection for our meats intended for export and clothing the President with power to exclude foreign products from our market in case the country sending them should perpetuate unjust discriminations against any product of the United States, placed this Government

in a position to effectively urge the removal of such discriminations against our meats. It is gratifying to be able to state that Germany, Denmark, Italy, Austria, and France, in the order named, have opened their ports to inspected American pork products. The removal of these restrictions in every instance was asked for and given solely upon the ground that we had now provided a meat inspection that should be accepted as adequate to the complete removal of the dangers, real or fancied, which had been previously urged. The State Department, our ministers abroad, and the Secretary of Agriculture have coöperated with unflagging and intelligent zeal for the accomplishment of this great result. The outlines of an agreement have been reached with Germany, looking to equitable trade concessions in consideration of the continued free importation of her sugars, but the time has not yet arrived when this correspondence can be submitted to Congress.

The recent political disturbances in the Republic of Brazil have excited regret and solicitude. The information we possessed was too meager to enable us to form a satisfactory judgment of the causes leading to the temporary assumption of supreme power by President Fonseca; but this Government did not fail to express to him its anxious solicitude for the peace of Brazil and for the maintenance of the free political institutions which had recently been established there, nor to offer our advice that great moderation should be observed in the clash of parties and the contest for leadership. These counsels were received in the most friendly spirit, and the latest information is that constitutional government has been re-established without bloodshed.

The lynching at New Orleans in March last of eleven men of Italian nativity by a mob of citizens was a most deplorable and discreditable incident. It did not, however, have its origin in any general animosity to the Italian people, nor in any disrespect to the Government of Italy, with which our relations were of the most friendly character. The fury of the mob was directed against these men as the supposed participants or accessories in the murder of a city officer. I do not allude to this as mitigating in any degree this offense against law and humanity, but only as affecting the international questions which grew out of it. It was at once represented by the Italian minister that several of those whose lives had been taken by the mob were Italian subjects, and a demand was made for the punishment of the participants and for an indemnity to the families of those who were killed. It is to be regretted that

the manner in which these claims were presented was not such as to promote a calm discussion of the questions involved; but this may well be attributed to the excitement and indignation which the crime naturally evoked. The views of this Government as to its obligations to foreigners domiciled here were fully stated in the correspondence, as well as its purpose to make an investigation of the affair with a view to determine whether there were present any circumstances that could, under such rules of duty as we had indicated, create an obligation upon the United States. The temporary absence of a Minister Plenipotentiary of Italy at this Capital has retarded the further correspondence, but it is not doubted that a friendly conclusion is attainable.

Some suggestions growing out of this unhappy incident are worthy the attention of Congress. It would, I believe, be entirely competent for Congress to make offenses against the treaty rights of foreigners domiciled in the United States cognizable in the Federal courts. This has not, however, been done, and the Federal officers and courts have no power in such cases to intervene either for the protection of a foreign citizen or for the punishment of his slayers. It seems to me to follow, in this state of the law, that the officers of the State charged with police and judicial powers in such cases must, in the consideration of international questions growing out of such incidents, be regarded in such sense as Federal agents as to make this Government answerable for their acts in cases where it would be answerable if the United States had used its constitutional power to define and punish crimes against treaty rights.

The civil war in Chile, which began in January last, was continued, but fortunately with infrequent and not important armed collisions, until August 28, when the Congressional forces landed near Valparaiso and, after a bloody engagement, captured that city. President Balmaceda at once recognized that his cause was lost, and a provisional government was speedily established by the victorious party. Our minister was promptly directed to recognize and put himself in communication with this Government so soon as it should have established its *de facto* character, which was done. During the pendency of this civil contest frequent indirect appeals were made to this Government to extend belligerent rights to the insurgents and to give audience to their representatives. This was declined, and that policy was pursued throughout, which this Government, when wrenched by civil war, so strenuously insisted upon on the part of European nations. The *Itata*, an armed vessel com-

manded by a naval officer of the insurgent fleet, manned by its sailors and with soldiers on board, was seized under process of the United States court at San Diego, California, for a violation of our neutrality laws. While in the custody of an officer of the court the vessel was forcibly wrested from his control and put to sea. It would have been inconsistent with the dignity and self-respect of this Government not to have insisted that the *Itata* should be returned to San Diego to abide the judgment of the court. This was so clear to the Junta of the Congressional party, established at Iquique, that, before the arrival of the *Itata* at that port, the Secretary of Foreign Relations of the Provisional Government addressed to Rear-Admiral Brown, commanding the United States naval forces, a communication, from which the following is an extract :

"The Provisional Government has learned by the cablegrams of the Associated Press that the transport *Itata*, detained in San Diego by order of the United States for taking on board munitions of war and in possession of the marshal, left the port, carrying on board this official, who was landed at a point near the coast, and then continued her voyage. * * * If this news be correct, this Government would deplore the conduct of the *Itata*, and, as an evidence that it is not disposed to support or agree to the infraction of the laws of the United States, the undersigned takes advantage of the personal relations you have been good enough to maintain with him since your arrival in this port to declare to you that as soon as she is within reach of our orders his Government will put the *Itata*, with the arms and munitions she took on board in San Diego, at the disposition of the United States."

A trial in the district court of the United States for the southern district of California has recently resulted in a decision holding, among other things, that, inasmuch as the Congressional party had not been recognized as a belligerent, the acts done in its interest could not be a violation of our neutrality laws. From this judgment the United States has appealed, not that the condemnation of the vessel is a matter of importance, but that we may know what the present state of our law is ; for, if this construction of the statute is correct, there is obvious necessity for revision and amendment.

During the progress of the war in Chile this Government tendered its good offices to bring about a peaceful adjustment, and it was at one time hoped that a good result might be reached ; but in this we were disappointed.

The instructions to our naval officers and to our minister at Santiago, from the first to the last of this struggle, enjoined upon them the most impartial treatment and absolute non-interference.

I am satisfied that these instructions were observed and that our representatives were always watchful to use their influence impartially in the interest of humanity, and, on more than one occasion, did so effectively. We could not forget, however, that this Government was in diplomatic relations with the then established Government of Chile, as it is now in such relations with the successor of that Government. I am quite sure that President Montt, who has, under circumstances of promise for the peace of Chile, been installed as President of that Republic, will not desire that, in the unfortunate event of any revolt against his authority, the policy of this Government should be other than that which we have recently observed. No official complaint of the conduct of our minister or of our naval officers during the struggle has been presented to this Government; and it is a matter of regret that so many of our own people should have given ear to unofficial charges and complaints that manifestly had their origin in rival interests and in a wish to pervert the relations of the United States with Chile.

The collapse of the government of Balmaceda brought about a condition which is unfortunately too familiar in the history of the Central and South American States. With the overthrow of the Balmaceda government, he and many of his councilors and officers became at once fugitives for their lives and appealed to the commanding officers of the foreign naval vessels in the harbor of Valparaiso and to the resident foreign ministers at Santiago for asylum. This asylum was freely given, according to my information, by the naval vessels of several foreign powers and by several of the legations at Santiago. The American minister, as well as his colleagues, acting upon the impulses of humanity, extended asylum to political refugees whose lives were in peril. I have not been willing to direct the surrender of such of these persons as are still in the American legation without suitable conditions.

It is believed that the Government of Chile is not in a position, in view of the precedents with which it has been connected, to broadly deny the right of asylum, and the correspondence has not thus far presented any such denial. The treatment of our minister for a time was such as to call for a decided protest, and it was very gratifying to observe that unfriendly measures, which were undoubtedly the result of the prevailing excitement, were at once rescinded or suitably relaxed.

On the 16th of October an event occurred in Valparaiso so serious and tragic in its circumstances and results as to very justly excite the indignation of our people and to call for prompt and decided action on the part of this Government. A considerable number of the sailors

of the United States steamship *Baltimore*, then in the harbor of Valparaiso, being upon shore leave and unarmed, were assaulted by armed men nearly simultaneously in different localities in the city. One petty officer was killed outright and seven or eight seamen were seriously wounded, one of whom has since died. So savage and brutal was the assault that several of our sailors received more than two, and one as many as eighteen, stab wounds. An investigation of the affair was promptly made by a board of officers of the *Baltimore*, and their report shows that these assaults were unprovoked, that our men were conducting themselves in a peaceable and orderly manner, and that some of the police of the city took part in the assault and used their weapons with fatal effect, while a few others, with some well-disposed citizens, endeavored to protect our men. Thirty-six of our sailors were arrested, and some of them, while being taken to prison, were cruelly beaten and maltreated. The fact that they were all discharged, no criminal charge being lodged against any one of them, shows very clearly that they were innocent of any breach of the peace.

So far as I have yet been able to learn no other explanation of this bloody work has been suggested than that it had its origin in hostility to these men as sailors of the United States, wearing the uniform of their Government, and not in any individual act or personal animosity. The attention of the Chilean Government was at once called to this affair, and a statement of the facts obtained by the investigation we had conducted was submitted, accompanied by a request to be advised of any other or qualifying facts in the possession of the Chilean Government that might tend to relieve this affair of the appearance of an insult to this Government. The Chilean Government was also advised that if such qualifying facts did not exist this Government would confidently expect full and prompt reparation.

It is to be regretted that the reply of the Secretary for Foreign Affairs of the Provisional Government was couched in an offensive tone. To this no response has been made. This Government is now awaiting the result of an investigation which has been conducted by the criminal court at Valparaiso. It is reported, unofficially that the investigation is about completed, and it is expected that the result will soon be communicated to this Government, together with some adequate and satisfactory response to the note by which the attention of Chile was called to this incident. If these just expectations should be disappointed or further needless delay intervene, I will, by a special message, bring this matter again to the attention of Congress for such action as may be necessary.

The entire correspondence with the Government of Chile will at an early day be submitted to Congress.

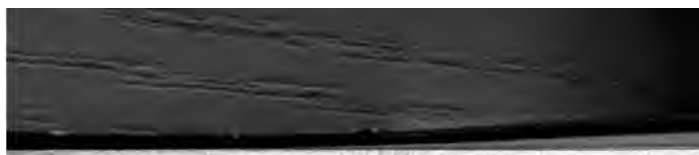
I renew the recommendation of my special message, dated January 16, 1890, for the adoption of the necessary legislation to enable this Government to apply in the case of Sweden and Norway the same rule in respect to the levying of tonnage dues as was claimed and secured to the shipping of the United States in 1828 under article 8 of the treaty of 1827.

The adjournment of the Senate without action on the pending acts for the suppression of the slave traffic in Africa and for the reform of the revenue tariff of the Independent State of the Congo left this Government unable to exchange those acts on the date fixed, July 2, 1891. A *modus vivendi* has been concluded by which the power of the Congo State to levy duties on imports is left unimpaired, and, by agreement of all the signatories to the general slave-trade act, the time for the exchange of ratifications on the part of the United States has been extended to February 2, 1892.

The late outbreak against foreigners in various parts of the Chinese Empire has been a cause of deep concern in view of the numerous establishments of our citizens in the interior of that country. This Government can do no less than insist upon a continuance of the protective and punitive measures which the Chinese Government has heretofore applied. No effort will be omitted to protect our citizens peaceably sojourning in China, but recent unofficial information indicates that what was at first regarded as an outbreak of mob violence against foreigners has assumed the larger form of an insurrection against public order.

The Chinese Government has declined to receive Mr. Blair as the Minister of the United States on the ground that, as a participant, while a Senator, in the enactment of the existing legislation against the introduction of Chinese laborers, he has become unfriendly and objectionable to China. I have felt constrained to point out to the Chinese Government the untenableness of this position, which seems to rest as much on the unacceptability of our legislation as on that of the person chosen, and which, if admitted, would practically debar the selection of any representative so long as the existing laws remain in force.

You will be called upon to consider the expediency of making special provision by law for the temporary admission of some Chinese artisans and laborers in connection with the exhibit of



Chinese industries at the approaching Columbian Exposition. I regard it as desirable that the Chinese exhibit be facilitated in every proper way.

A question has arisen with the Government of Spain touching the rights of American citizens in the Caroline Islands. Our citizens there, long prior to the confirmation of Spain's claim to the islands, had secured by settlement and purchase certain rights, to the recognition and maintenance of which the faith of Spain was pledged. I have had reason within the past year very strongly to protest against the failure to carry out this pledge on the part of His Majesty's ministers, which has resulted in great injustice and injury to the American residents.

The Government and people of Spain propose to celebrate the four hundredth anniversary of the discovery of America by holding an exposition at Madrid, which will open on the 12th of September and continue until the 31st of December, 1892. A cordial invitation has been extended to the United States to take part in this commemoration, and, as Spain was one of the first nations to express the intention to participate in the World's Columbian Exposition at Chicago, it would be very appropriate for this Government to give this invitation its friendly promotion.

Surveys for the connecting links of the projected Intercontinental Railway are in progress, not only in Mexico, but at various points along the course mapped out. Three surveying parties are now in the field under the direction of the Commission. Nearly 1,000 miles of the proposed road have been surveyed, including the most difficult part, that through Ecuador and the southern part of Colombia. The reports of the engineers are very satisfactory and show that no insurmountable obstacles have been met with.

On November 12, 1884, a treaty was concluded with Mexico reaffirming the boundary between the two countries as described in the treaties of February 2, 1848, and December 30, 1853. March 1, 1889, a further treaty was negotiated to facilitate the carrying out of the principles of the treaty of 1884 and to avoid the difficulties occasioned by reason of the changes and alterations that take place from natural causes in the Rio Grande and Colorado rivers in the portions thereof constituting the boundary line between the two Republics. The International Boundary Commission, provided for by the treaty of 1889, to have exclusive jurisdiction of any question that may arise, has been named by the Mexican Government. An

appropriation is necessary to enable the United States to fulfill its treaty obligation in this respect.

The death of King Kalakaua in the United States afforded occasion to testify our friendship for Hawaii by conveying the King's body to his own land in a naval vessel with all due honors. The Government of his successor, Queen Liliuokalani, is seeking to promote closer commercial relations with the United States. Surveys for the much-needed submarine cable from our Pacific Coast to Honolulu are in progress, and this enterprise should have the suitable promotion of the two Governments. I strongly recommend that provision be made for improving the harbor of Pearl River and equipping it as a naval station.

The arbitration treaty formulated by the International American Conference lapsed by reason of the failure to exchange ratifications fully within the limit of time provided; but several of the Governments concerned have expressed a desire to save this important result of the conference by an extension of the period. It is, in my judgment, incumbent upon the United States to conserve the influential initiative it has taken in this measure by ratifying the instrument and by advocating the proposed extension of the time for exchange. These views have been made known to the other signatories.

This Government has found occasion to express, in a friendly spirit, but with much earnestness, to the Government of the Czar, its serious concern because of the harsh measures now being enforced against the Hebrews in Russia. By the revival of antisemitic laws, long in abeyance, great numbers of those unfortunate people have been constrained to abandon their homes and leave the empire by reason of the impossibility of finding subsistence within the pale to which it is sought to confine them. The immigration of these people to the United States—many other countries being closed to them—is largely increasing and is likely to assume proportions which may make it difficult to find homes and employment for them here and to seriously affect the labor market. It is estimated that over one million will be forced from Russia within a few years. The Hebrew is never a beggar; he has always kept the law—life by toil—often under severe and oppressive civil restrictions. It is also true that no race, sect, or class has more fully cared for its own than the Hebrew race. But the sudden transfer of such a multitude, under conditions that tend to strip them of their small accumula-

tions and to depress their energies and courage, is neither good for them nor for us.

The banishment, whether by direct decree or by not less certain indirect methods, of so large a number of men and women is not a local question. A decree to leave one country is, in the nature of things, an order to enter another—some other. This consideration, as well as the suggestions of humanity, furnishes ample ground for the remonstrances which we have presented to Russia, while our historic friendship for that Government can not fail to give the assurance that our representations are those of a sincere wellwisher.

The annual report of the Maritime Canal Company of Nicaragua shows that much costly and necessary preparatory work has been done during the year in the construction of shops, railroad tracks, and harbor piers and breakwaters, and that the work of canal construction has made some progress.

I deem it to be a matter of the highest concern to the United States that this canal, connecting the waters of the Atlantic and Pacific oceans and giving to us a short water communication between our ports upon those two great seas, should be speedily constructed and at the smallest practicable limit of cost. The gain in freights to the people and the direct saving to the Government of the United States in the use of its naval vessels would pay the entire cost of this work within a short series of years. The report of the Secretary of the Navy shows the saving in our naval expenditures which would result.

The Senator from Alabama (Mr. Morgan), in his argument upon this subject before the Senate at the last session, did not overestimate the importance of this work when he said that "the canal is the most important subject now connected with the commercial growth and progress of the United States."

If this work is to be promoted by the usual financial methods and without the aid of this Government, the expenditures, in its interest-bearing securities and stocks, will probably be twice the actual cost. This will necessitate higher tolls and constitute a heavy and altogether needless burden upon our commerce and that of the world. Every dollar of the bonds and stock of the company should represent a dollar expended in the legitimate and economical prosecution of the work. This is only possible by giving to the bonds the guaranty of the United States Government. Such a guaranty would secure the ready sale at par of a 3 per cent bond, from time to time, as the money was needed. I do not doubt that, built upon these business methods, the canal would, when fully inaugu-

rated, earn its fixed charges and operating expenses. But if its bonds are to be marketed at heavy discounts and every bond sold is to be accompanied by a gift of stock, as has come to be expected by investors in such enterprises, the traffic will be seriously burdened to pay interest and dividends. I am quite willing to recommend Government promotion in the prosecution of a work which, if no other means offered for securing its completion, is of such transcendent interest that the Government should, in my opinion, secure it by direct appropriations from its Treasury.

A guaranty of the bonds of the Canal Company to an amount necessary to the completion of the canal could, I think, be so given as not to involve any serious risk of ultimate loss. The things to be carefully guarded are the completion of the work within the limits of the guaranty, the subrogation of the United States to the rights of the first-mortgage bondholders for any amounts it may have to pay, and in the meantime a control of the stock of the company as a security against mismanagement and loss. I most sincerely hope that neither party nor sectional lines will be drawn upon this great American project, so full of interest to the people of all our States and so influential in its effects upon the prestige and prosperity of our common country.

The Island of Navassa, in the West Indian group, has, under the provisions of Title 72 of the Revised Statutes, been recognized by the President, as appertaining to the United States. It contains guano deposits, is owned by the Navassa Phosphate Company, and is occupied solely by its employees. In September, 1889, a revolt took place among these laborers, resulting in the killing of some of the agents of the company, caused, as the laborers claimed, by cruel treatment. These men were arrested and tried in the United States court at Baltimore, under section 5576 of the statute referred to, as if the offenses had been committed on board a merchant vessel of the United States on the high seas. There appeared on the trial, and otherwise came to me, such evidences of the bad treatment of the men that, in consideration of this and of the fact that the men had no access to any public officer or tribunal for protection or the redress of their wrongs, I commuted the death sentences that had been passed by the court upon three of them. In April last my attention was again called to this island, and to the unregulated condition of things there, by a letter from a colored laborer, who complained that he was wrongfully detained upon the island by the phosphate company after the expiration of his contract of service. A naval vessel was sent to

examine into the case of this man and generally into the condition of things on the island. It was found that the laborer referred to had been detained beyond the contract limit and that a condition of revolt again existed among the laborers. A board of naval officers reported, among other things, as follows:

"We would desire to state further that the discipline maintained on the island seems to be that of a convict establishment, without its comforts and cleanliness, and that, until more attention is paid to the shipping of laborers, by placing it under Government supervision to prevent misunderstanding and misrepresentation, and until some amelioration is shown in the treatment of the laborers, these disorders will be of constant occurrence."

I recommend legislation that shall place labor contracts upon this and other islands having the relation that Navassa has to the United States under the supervision of a court commissioner, and that shall provide, at the expense of the owners, an officer to reside upon the islands with power to judge and adjust disputes and to enforce a just and humane treatment of the employees. It is inexcusable that American laborers should be left within our own jurisdiction without access to any Government officer or tribunal for their protection and the redress of their wrongs.

International copyright has been secured, in accordance with the conditions of the act of March 3, 1891, with Belgium, France, Great Britain and the British possessions, and Switzerland, the laws of those countries permitting to our citizens the benefit of copyright on substantially the same basis as to their own citizens or subjects. With Germany a special convention has been negotiated upon this subject, which will bring that country within the reciprocal benefits of our legislation.

The general interest in the operations of the Treasury Department has been much augmented during the last year by reason of the conflicting predictions, which accompanied and followed the tariff and other legislation of the last Congress affecting the revenues, as to the results of this legislation upon the Treasury and upon the country. On the one hand it was contended that imports would so fall off as to leave the Treasury bankrupt and that the prices of articles entering into the living of the people would be so enhanced as to disastrously affect their comfort and happiness, while on the other it was argued that the loss to the revenue, largely the result of placing sugar on the free list, would be a direct gain to the people; that the prices of the necessities of life, in-

cluding those most highly protected, would not be enhanced; that labor would have a larger market and the products of the farm advanced prices; while the Treasury surplus and receipts would be adequate to meet the appropriations, including the large exceptional expenditures for the refunding to the States of the direct tax and the redemption of the $4\frac{1}{2}$ per cent bonds.

It is not my purpose to enter at any length into a discussion of the effects of the legislation to which I have referred; but a brief examination of the statistics of the Treasury and a general glance at the state of business throughout the country will, I think, satisfy any impartial inquirer that its results have disappointed the evil prophecies of its opponents and in a large measure realized the hopeful predictions of its friends. Rarely, if ever before, in the history of the country has there been a time when the proceeds of one day's labor or the product of one farmed acre would purchase so large an amount of those things that enter into the living of the masses of the people. I believe that a full test will develop the fact that the tariff act of the Fifty-first Congress is very favorable in its average effect upon the prices of articles entering into common use.

During the twelve months from October 1, 1890, to September 30, 1891, the total value of our foreign commerce (imports and exports combined) was \$1,747,806,406, which was the largest of any year in the history of the United States. The largest in any previous year was in 1890, when our commerce amounted to \$1,647,139,093, and the last year exceeds this enormous aggregate by over one hundred millions. It is interesting, and to some will be surprising, to know that during the year ending September 30, 1891, our imports of merchandise amounted to \$824,715,270, which was an increase of more than eleven million dollars over the value of the imports of the corresponding months of the preceding year, when the imports of merchandise were unusually large in anticipation of the tariff legislation then pending. The average annual value of the imports of merchandise for the ten years from 1881 to 1890 was \$692,186,522, and during the year ending September 30, 1891, this annual average was exceeded by \$132,528,469.

The value of free imports during the twelve months ending September 30, 1891, was \$118,092,387 more than the value of free imports during the corresponding twelve months of the preceding year, and there was during the same period a decrease of \$106,846,508 in the value of imports of dutiable merchandise. The percentage of merchandise admitted free of duty during the year to which I have referred, the first under the new tariff, was 48.18, while during the preceding twelve months, under the old tariff, the percentage was

34.27, an increase of 13.91 per cent. If we take the six months ending September 30 last, which covers the time during which sugars have been admitted free of duty, the per cent of value of merchandise imported free of duty is found to be 55.37, which is a larger percentage of free imports than during any prior fiscal year in the history of the Government.

If we turn to exports of merchandise the statistics are full of gratification. The value of such exports of merchandise for the twelve months ending September 30, 1891, was \$923,091,136, while for the corresponding previous twelve months it was \$860,177,115, an increase of \$62,914,021, which is nearly three times the average annual increase of exports of merchandise for the preceding twenty years; this exceeds in amount and value the exports of merchandise during any year in the history of the Government. The increase in the value of exports of agricultural products during the year referred to over the corresponding twelve months of the prior year was \$45,846,197, while the increase in the value of exports of manufactured products was \$16,838,240.

There is certainly nothing in the condition of trade, foreign or domestic, there is certainly nothing in the condition of our people of any class, to suggest that the existing tariff and revenue legislation bears oppressively upon the people or retards the commercial development of the nation. It may be argued that our condition would be better if tariff legislation were upon a free-trade basis; but it can not be denied that all the conditions of prosperity and of general contentment are present in a larger degree than ever before in our history, and that, too, just when it was prophesied they would be in the worst state. Agitation for radical changes in tariff and financial legislation can not help, but may seriously impede, business, to the prosperity of which some degree of stability in legislation is essential.

I think there are conclusive evidences that the new tariff has created several great industries which will, within a few years, give employment to several hundred thousand American working men and women. In view of the somewhat overcrowded condition of the labor market of the United States every patriotic citizen should rejoice at such a result.

The report of the Secretary of the Treasury shows that the total receipts of the Government, from all sources, for the fiscal year ending June 30, 1891, were \$458,544,233.03, while the expenditures for the same period were \$421,304,470.46, leaving a surplus of \$37,239,762.57.

The receipts of the fiscal year ending June 30, 1892, actual and

estimated, are \$433,000,000 and the expenditures \$409,000,000. For the fiscal year ending June 30, 1893, the estimated receipts are \$455,336,350 and the expenditures \$441,300,093.

Under the law of July 14, 1890, the Secretary of the Treasury has purchased (since August 13) during the fiscal year 48,393,113 ounces of silver bullion at an average cost of \$1.045 per ounce. The highest price paid during the year was \$1.2025, and the lowest, \$0.9636. In exchange for this silver bullion there have been issued \$50,577,498 of the Treasury notes authorized by the act. The lowest price of silver reached during the fiscal year was \$0.9636 on April 22, 1891; but on November 1 the market price was only \$0.96, which would give to the silver dollar a bullion value of 74 $\frac{1}{4}$ cents.

Before the influence of the prospective silver legislation was felt in the market silver was worth in New York about 0.955 per ounce. The ablest advocates of free coinage in the last Congress were most confident in their predictions that the purchases by the Government required by the law would at once bring the price of silver to 1.2929 per ounce, which would make the bullion value of a dollar 100 cents and hold it there. The prophecies of the anti-silver men of disasters to result from the coinage of \$2,000,000 per month were not wider of the mark. The friends of free silver are not agreed, I think, as to the causes that brought their hopeful predictions to naught. Some facts are known. The exports of silver from London to India during the first nine months of this calendar year fell off over 50 per cent, or \$17,202,730, compared with the same months of the preceding year. The exports of domestic silver bullion from this country, which had averaged for the last ten years over \$17,000,000, fell in the last fiscal year to \$13,797,391; while, for the first time in recent years, the imports of silver into this country exceeded the exports by the sum of \$2,745,365. In the previous year the net exports of silver from the United States amounted to \$8,545,455. The production of the United States increased from 50,000,000 ounces in 1889 to 54,500,000 in 1890. The Government is now buying and putting aside annually 54,000,000 ounces, which, allowing for 7,140,000 ounces of new bullion used in the arts, is 6,640,000 more than our domestic product available for coinage.

I hope the depression in the price of silver is temporary and that a further trial of this legislation will more favorably affect it. That the increased volume of currency thus supplied for the use of the people was needed and that beneficial results upon trade and prices have followed this legislation I think must be very clear to everyone; nor should it be forgotten that for every dollar of these notes issued

a full dollar's worth of silver bullion is at the time deposited in the Treasury as a security for its redemption. Upon this subject, as upon the tariff, my recommendation is that the existing laws be given a full trial and that our business interests be spared the distressing influence which threats of radical changes always impart. Under existing legislation it is in the power of the Treasury Department to maintain that essential condition of national finance as well as of commercial prosperity—the parity in use of the coin dollars and their paper representatives. The assurance that these powers would be freely and unhesitatingly used has done much to produce and sustain the present favorable business conditions.

I am still of the opinion that the free coinage of silver under existing conditions would disastrously affect our business interests at home and abroad. We could not hope to maintain an equality in the purchasing power of the gold and silver dollar in our own markets, and in foreign trade the stamp gives no added value to the bullion contained in coins. The producers of the country, its farmers and laborers, have the highest interest that every dollar, paper or coin, issued by the Government shall be as good as any other. If there is one less valuable than another its sure and constant errand will be to pay them for their toil and for their crops. The money-lender will protect himself by stipulating for payment in gold, but the laborer has never been able to do that. To place business upon a silver basis would mean a sudden and severe contraction of the currency, by the withdrawal of gold and gold notes, and such an unsettling of all values as would produce a commercial panic. I can not believe that a people so strong and prosperous as ours will promote such a policy.

The producers of silver are entitled to just consideration, but they should not forget that the Government is now buying and putting out of the market what is the equivalent of the entire product of our silver mines. This is more than they themselves thought of asking two years ago. I believe it is the earnest desire of a great majority of the people, as it is mine, that a full coin use shall be made of silver just as soon as the coöperation of other nations can be secured and a ratio fixed that will give circulation equally to gold and silver. The business of the world requires the use of both metals; but I do not see any prospect of gain, but much of loss, by giving up the present system, in which a full use is made of gold and a large use of silver, for one in which silver alone will circulate. Such an event would be at once fatal to the further progress of the silver movement. *Bimetallism is the desired end, and*

the true friends of silver will be careful not to overrun the goal and bring in silver monometallism, with its necessary attendants, the loss of our gold to Europe and the relief of the pressure there for a larger currency. I have endeavored by the use of official and unofficial agencies to keep a close observation of the state of public sentiment in Europe upon this question, and have not found it to be such as to justify me in proposing an international conference. There is, however, I am sure, a growing sentiment in Europe in favor of a larger use of silver, and I know of no more effectual way of promoting this sentiment than by accumulating gold here. A scarcity of gold in the European reserves will be the most persuasive argument for the use of silver.

The exports of gold to Europe, which began in February last and continued until the close of July, aggregated over \$70,000,000. The net loss of gold during the fiscal year was nearly \$68,000,000. That no serious monetary disturbance resulted was most gratifying, and gave to Europe fresh evidence of the strength and stability of our financial institutions. With the movement of crops the outflow of gold was speedily stopped, and a return set in. Up to December 1 we had recovered of our gold loss at the port of New York \$27,854,000, and it is confidently believed that during the winter and spring this aggregate will be steadily and largely increased.

The presence of a large cash surplus in the Treasury has for many years been the subject of much unfavorable criticism and has furnished an argument to those who have desired to place the tariff upon a purely revenue basis. It was agreed by all that the withdrawal from circulation of so large an amount of money was an embarrassment to the business of the country and made necessary the intervention of the Department at frequent intervals to relieve threatened monetary panics. The surplus on March 1, 1889, was \$183,827,190.29. The policy of applying this surplus to the redemption of the interest-bearing securities of the United States was thought to be preferable to that of depositing it without interest in selected national banks. There have been redeemed since the date last mentioned of interest-bearing securities \$259,079,350, resulting in a reduction of the annual interest charge of \$11,684,675. The money which had been deposited in banks without interest has been gradually withdrawn and used in the redemption of bonds.

The result of this policy, of the silver legislation, and of the refunding of the $4\frac{1}{2}$ per cent bonds has been a large increase of the money in circulation. At the date last named the circulation was \$1,404,205,896, or \$23.03 per capita; while on the 1st day of De-

ember, 1891, it had increased to \$1,577,262,070, or \$24.38 per capita. The offer of the Secretary of the Treasury to the holders of the 4½ per cent bonds to extend the time of redemption, at the option of the Government, at an interest of 2 per cent, was accepted by the holders of about one-half the amount, and the unextended bonds are being redeemed on presentation.

The report of the Secretary of War exhibits the results of an intelligent, progressive, and business-like administration of a Department which has been too much regarded as one of mere routine. The separation of Secretary Proctor from the Department by reason of his appointment as a Senator from the State of Vermont is a source of great regret to me and to his colleagues in the Cabinet, as I am sure it will be to all those who have had business with the Department while under his charge.

In the administration of army affairs some especially good work has been accomplished. The efforts of the Secretary to reduce the percentage of desertions by removing the causes that promoted it have been so successful as to enable him to report for the last year a lower percentage of desertion than has been before reached in the history of the Army. The resulting money saving is considerable, but the improvement in the morale of the enlisted men is the most valuable incident of the reforms which have brought about this result.

The work of securing sites for shore batteries for harbor defense and the manufacture of mortars and guns of high power to equip them have made good progress during the year. The preliminary work of tests and plans, which so long delayed a start, is now out of the way. Some guns have been completed, and with an enlarged shop and a more complete equipment at Watervliet the Army will soon be abreast of the Navy in gun construction. Whatever unavoidable causes of delay may arise, there should be none from delayed or insufficient appropriations. We shall be greatly embarrassed in the proper distribution and use of naval vessels until adequate shore defenses are provided for our harbors.

I concur in the recommendation of the Secretary that the three-battalion organization be adopted for the infantry. The adoption of a smokeless powder and of a modern rifle equal in range, precision, and rapidity of fire to the best now in use will, I hope, not be longer delayed.

The project of enlisting Indians and organizing them into separate companies upon the same basis as other soldiers was made the subject of *very careful study by the Secretary* and received

my approval. Seven companies have been completely organized and seven more are in process of organization. The results of six months' training have more than realized the highest anticipations. The men are readily brought under discipline, acquire the drill with facility, and show great pride in the right discharge of their duties and perfect loyalty to their officers, who declare that they would take them into action with confidence. The discipline, order, and cleanliness of the military posts will have a wholesome and elevating influence upon the men enlisted, and through them upon their tribes, while a more friendly feeling for the whites and a greater respect for the Government will certainly be promoted.

The great work done in the Record and Pension Division of the War Department by Major Ainsworth, of the Medical Corps, and the clerks under him, is entitled to honorable mention. Taking up the work with nearly 41,000 cases behind, he closed the last fiscal year without a single case left over, though the new cases had increased 52 per cent in number over the previous year by reason of the pension legislation of the last Congress.

I concur in the recommendation of the Attorney-General that the right in felony cases to a review by the Supreme Court be limited. It would seem that personal liberty would have a safe guaranty if the right of review in cases involving only fine and imprisonment were limited to the circuit court of appeals, unless a constitutional question should in some way be involved.

The judges of the Court of Private Land Claims, provided for by the act of March 3, 1891, have been appointed and the court organized. It is now possible to give early relief to communities long repressed in their development by unsettled land titles and to establish the possession and right of settlers whose lands have been rendered valueless by adverse and unfounded claims.

The act of July 9, 1888, provided for the incorporation and management of a reform school for girls in the District of Columbia; but it has remained inoperative for the reason that no appropriation has been made for construction or maintenance. The need of such an institution is very urgent. Many girls could be saved from depraved lives by the wholesome influences and restraints of such a school. I recommend that the necessary appropriation be made for a site and for construction.

The enforcement by the Treasury Department of the law prohibiting the coming of Chinese to the United States has been effective as to such as seek to land from vessels entering our ports. The result has been to divert the travel to vessels entering the ports of

British Columbia, whence passage into the United States at obscure points along the Dominion boundary is easy. A very considerable number of Chinese laborers have, during the past year, entered the United States from Canada and Mexico.

The officers of the Treasury Department and of the Department of Justice have used every means at their command to intercept this immigration ; but the impossibility of perfectly guarding our extended frontier is apparent. The Dominion Government collects a head tax of \$50 from every Chinaman entering Canada, and thus derives a considerable revenue from those who only use its ports to reach a position of advantage to evade our exclusion laws. There seems to be satisfactory evidence that the business of passing Chinamen through Canada to the United States is organized and quite active. The Department of Justice has construed the laws to require the return of any Chinaman found to be unlawfully in this country to China as the country from which he came, notwithstanding the fact that he came by way of Canada ; but several of the district courts have, in cases brought before them, overruled this view of the law and decided that such persons must be returned to Canada. This construction robs the law of all effectiveness, even if the decrees could be executed, for the men returned can the next day recross our border. But the only appropriation made is for sending them back to China, and the Canadian officials refuse to allow them to reënter Canada without the payment of the \$50 head tax. I recommend such legislation as will remedy these defects in the law.

In previous messages I have called the attention of Congress to the necessity of so extending the jurisdiction of the United States courts as to make triable therein any felony committed while in the act of violating a law of the United States. These courts can not have that independence and effectiveness which the Constitution contemplates so long as the felonious killing of court officers, jurors, and witnesses in the discharge of their duties, or by reason of their acts as such, is only cognizable in the State courts. The work done by the Attorney-General and the officers of his Department, even under the present inadequate legislation, has produced some notable results in the interest of law and order.

The Attorney-General and also the Commissioners of the District of Columbia call attention to the defectiveness and inadequacy of the laws relating to crimes against chastity in the District of Columbia. A stringent code upon this subject has been provided by Congress for Utah, and it is a matter of surprise that the needs of this District should have been so long overlooked.

In the report of the Postmaster-General some very gratifying results are exhibited and many betterments of the service suggested. A perusal of the report gives abundant evidence that the supervision and direction of the postal system have been characterized by an intelligent and conscientious desire to improve the service. The revenues of the Department show an increase of over five millions of dollars, with a deficiency for the year 1892 of less than four millions of dollars, while the estimate for the year 1893 shows a surplus of receipts over expenditures.

Ocean-mail post-offices have been established upon the steamers of the North German Lloyd and Hamburg lines, saving, by the distribution on shipboard, from two to fourteen hours' time in the delivery of mail at the port of entry and often much more than this in the delivery at interior places. So thoroughly has this system, initiated by Germany and the United States, evidenced its usefulness that it can not be long before it is installed upon all the great ocean mail-carrying steamships.

Eight thousand miles of new postal service has been established upon railroads, the car distribution to sub-stations in the great cities has been increased about 12 per cent, while the percentage of errors in distribution has, during the past year, been reduced over one-half. An appropriation was given by the last Congress for the purpose of making some experiments in free delivery in the smaller cities and towns. The results of these experiments have been so satisfactory that the Postmaster-General recommends, and I concur in the recommendation, that the free-delivery system be at once extended to towns of 5,000 population. His discussion of the inadequate facilities extended under our present system to rural communities and his suggestions with a view to give these communities a fuller participation in the benefits of the postal service are worthy of your careful consideration. It is not just that the farmer, who receives his mail at a neighboring town, should not only be compelled to send to the post-office for it, but to pay a considerable rent for a box in which to place it or to wait his turn at a general-delivery window, while the city resident has his mail brought to his door. It is stated that over 54,000 neighborhoods are, under the present system, receiving mail at post-offices where money orders and postal notes are not issued. The extension of this system to these communities is especially desirable, as the patrons of such offices are not possessed of the other facilities offered in more populous communities for the transmission of small sums of money.

I have, in a message to the preceding Congress, expressed my views

to a modified use of the telegraph in connection with the postal service.

In pursuance of the ocean-mail law of March 3, 1891, and after a most careful study of the whole subject and frequent conferences with shipowners, boards of trade, and others, advertisements were issued by the Postmaster-General for 53 lines of ocean-mail service: 10 to Great Britain and the Continent, 27 to South America, 3 to China and Japan, 4 to Australia and the Pacific Islands, 7 to the West Indies, and 2 to Mexico. It was not, of course, expected that bids for all these lines would be received or that service upon them all would be contracted for. It was intended, in furtherance of the act, to secure as many new lines as possible, while including in the list most or all of the foreign lines now occupied by American ships. It was hoped that a line to England and perhaps one to the Continent would be secured; but the outlay required to equip such lines wholly with new ships of the first class and the difficulty of establishing new lines in competition with those already established deterred bidders whose interest had been enlisted. It is hoped that a way may yet be found of overcoming these difficulties. The Brazil Steamship Company, by reason of a miscalculation as to the speed of its vessels, was not able to bid under the terms of the advertisement. The policy of the Department was to secure from the established lines an improved service as a condition of giving to them the benefits of the law. This in all instances has been attained. The Postmaster-General estimates that an expenditure in American shipyards of about ten millions of dollars will be necessary to enable the bidders to construct the ships called for by the service which they have accepted. I do not think there is any reason for discouragement or for any turning back from the policy of this legislation. Indeed, a good beginning has been made, and, as the subject is further considered and understood by capitalists and shipping people, new lines will be ready to meet future proposals, and we may date from the passage of this law the revival of American shipping interests and the recovery of a fair share of the carrying trade of the world. We were receiving for foreign postage nearly two millions of dollars under the old system and the outlay for ocean-mail service did not exceed \$600,000 per annum. It is estimated by the Postmaster-General that, if all the contracts proposed are completed, it will require \$247,354 for this year, in addition to the appropriation for sea and inland postage already in the estimates, and that for the next fiscal year, ending June 30, 1893, there would probably be needed about \$560,000.

The report of the Secretary of the Navy shows a gratifying increase of new naval vessels in commission. The *Newark*, *Concord*, *Bennington*, and *Miantonomoh* have been added during the year, with an aggregate of something more than 11,000 tons. Twenty-four war ships of all classes are now under construction in the navy-yards and private shops, but, while the work upon them is going forward satisfactorily, the completion of the more important vessels will yet require about a year's time. Some of the vessels now under construction, it is believed, will be triumphs of naval engineering. When it is recollected that the work of building a modern navy was only initiated in the year 1883, that our naval constructors and shipbuilders were practically without experience in the construction of large iron or steel ships, that our engine shops were unfamiliar with great marine engines, and that the manufacture of steel forgings for guns and plates was almost wholly a foreign industry, the progress that has been made is not only highly satisfactory, but furnishes the assurance that the United States will before long attain, in the construction of such vessels, with their engines and armaments, the same preëminence which it attained when the best instrument of ocean commerce was the clipper ship and the most impressive exhibit of naval power the old wooden three-decker man-of-war. The officers of the Navy and the proprietors and engineers of our great private shops have responded with wonderful intelligence and professional zeal to the confidence expressed by Congress in its liberal legislation. We have now at Washington a gun shop, organized and conducted by naval officers, that in its system, economy, and product is unexcelled. Experiments with armor plate have been conducted during the year with most important results. It is now believed that a plate of higher resisting power than any in use has been found and that the tests have demonstrated that cheaper methods of manufacture than those heretofore thought necessary can be used.

I commend to your favorable consideration the recommendations of the Secretary, who has, I am sure, given to them the most conscientious study. There should be no hesitation in promptly completing a navy of the best modern type, large enough to enable this country to display its flag in all seas for the protection of its citizens and of its extending commerce. The world needs no assurance of the peaceful purposes of the United States, but we shall probably be in the future more largely a competitor in the commerce of the world, and it is essential to the dignity of this nation and to that peaceful influence which it should exercise on this hemisphere that

its navy should be adequate, both upon the shores of the Atlantic and of the Pacific.

The report of the Secretary of the Interior shows that a very gratifying progress has been made in all of the bureaus which make up that complex and difficult Department.

The work in the Bureau of Indian Affairs was perhaps never so large as now, by reason of the numerous negotiations which have been proceeding with the tribes for a reduction of the reservations, with the incident labor of making allotments, and was never more carefully conducted. The provision of adequate school facilities for Indian children and the locating of adult Indians upon farms involve the solution of the "Indian question." Everything else—rations, annuities, and tribal negotiations, with the agents, inspectors, and commissioners who distribute and conduct them—must pass away when the Indian has become a citizen, secure in the individual ownership of a farm from which he derives his subsistence by his own labor, protected by and subordinate to the laws which govern the white man, and provided by the General Government or by the local communities in which he lives with the means of educating his children. When an Indian becomes a citizen in an organized State or Territory his relation to the General Government ceases, in great measure, to be that of a ward; but the General Government ought not at once to put upon the State or Territory the burden of the education of his children. It has been my thought that the Government schools and school buildings upon the reservations would be absorbed by the school systems of the States and Territories; but, as it has been found necessary to protect the Indian against the compulsory alienation of his land by exempting him from taxation for a period of twenty-five years, it would seem to be right that the General Government, certainly where there are tribal funds in its possession, should pay to the school fund of the State what would be equivalent to the local school tax upon the property of the Indian. It will be noticed from the report of the Commissioner of Indian Affairs that already some contracts have been made with district schools for the education of Indian children. There is great advantage, I think, in bringing the Indian children into mixed schools. This process will be gradual, and in the meantime the present educational provisions and arrangements, the result of the best experience of those who have been charged with this work, should be continued. This will enable those religious bodies that have undertaken the work of Indian education with so much zeal, and with results so *restraining and beneficent*, to place their institu-

tions in new and useful relations to the Indian and to his white neighbors.

The outbreak among the Sioux, which occurred in December last, is as to its causes and incidents fully reported upon by the War Department and the Department of the Interior. That these Indians had some just complaints, especially in the matter of the reduction of the appropriation for rations and in the delays attending the enactment of laws to enable the Department to perform the engagements entered into with them, is probably true; but the Sioux tribes are naturally warlike and turbulent, and their warriors were excited by their medicine men and chiefs, who preached the coming of an Indian Messiah who was to give them power to destroy their enemies. In view of the alarm that prevailed among the white settlers near the reservation and of the fatal consequences that would have resulted from an Indian incursion, I placed at the disposal of General Miles, commanding the Division of the Missouri, all such forces as were thought by him to be required. He is entitled to the credit of having given thorough protection to the settlers and of bringing the hostiles into subjection with the least possible loss of life.

The appropriation of \$2,991,450 for the Choctaws and Chickasaws, contained in the general Indian appropriation bill of March 3, 1891, has not been expended, for the reason that I have not yet approved a release (to the Government) of the Indian claim to the lands mentioned. This matter will be made the subject of a special message, placing before Congress all the facts which have come to my knowledge.

The relation of the five civilized tribes now occupying the Indian Territory to the United States is not, I believe, that best calculated to promote the highest advancement of these Indians. That there should be within our borders five independent States, having no relations, except those growing out of treaties, with the Government of the United States, no representation in the National Legislature, its people not citizens, is a startling anomaly.

It seems to me to be inevitable that there shall be before long some organic changes in the relation of these people to the United States. What form these changes should take I do not think it desirable now to suggest, even if they were well defined in my own mind. They should certainly involve the acceptance of citizenship by the Indians and a representation in Congress. These Indians should have opportunity to present their claims and grievances upon the floor rather than, as now, in the lobby. If a commission could be appointed to visit these tribes to confer with them in a friendly spirit

upon this whole subject, even if no agreement were presently reached, the feeling of the tribes upon this question would be developed and discussion would prepare the way for changes which must come sooner or later.

The good work of reducing the larger Indian reservations, by allotments in severalty to the Indians and the cession of the remaining lands to the United States for disposition under the homestead law, has been prosecuted during the year with energy and success. In September last I was enabled to open to settlement in the Territory of Oklahoma 900,000 acres of land, all of which was taken up by settlers in a single day. The rush for these lands was accompanied by a great deal of excitement, but was, happily, free from incidents of violence.

It was a source of great regret that I was not able to open at the same time the surplus lands of the Cheyenne and Arapahoe Reservation, amounting to about 3,000,000 acres, by reason of the insufficiency of the appropriation for making the allotments. Deserving and impatient settlers are waiting to occupy these lands, and I urgently recommend that a special deficiency appropriation be promptly made of the small amount needed, so that the allotments may be completed and the surplus lands opened in time to permit the settlers to get upon their homesteads in the early spring.

During the past summer the Cherokee Commission have completed arrangements with the Wichita, Kickapoo, and Tonkawa tribes, whereby, if the agreements are ratified by Congress, over 800,000 additional acres will be opened to settlement in Oklahoma.

The negotiation for the release by the Cherokees of their claim to the Cherokee Strip has made no substantial progress, so far as the Department is officially advised, but it is still hoped that the cession of this large and valuable tract may be secured. The price which the Commission was authorized to offer—one dollar and a quarter per acre—is, in my judgment, when all the circumstances as to title and the character of the lands are considered, a fair and adequate one and should have been accepted by the Indians.

Since March 4, 1889, about 23,000,000 acres have been separated from Indian reservations and added to the public domain for the use of those who desired to secure free homes under our beneficent laws. It is difficult to estimate the increase of wealth which will result from the conversion of these waste lands into farms, but it is more difficult to estimate the betterment which will result to the families that have found renewed hope and courage in the ownership of a home and the assurance of a comfortable subsistence under

free and healthful conditions. It is also gratifying to be able to feel, as we may, that this work has proceeded upon lines of justice towards the Indian, and that he may now, if he will, secure to himself the good influences of a settled habitation, the fruits of industry, and the security of citizenship.

Early in this administration a special effort was begun to bring up the work of the General Land Office. By faithful work the arrearages have been rapidly reduced. At the end of the last fiscal year only 84,172 final agricultural entries remained undisposed of, and the Commissioner reports that, with the present force, the work can be fully brought up by the end of the next fiscal year.

Your attention is called to the difficulty presented by the Secretary of the Interior as to the administration of the law of March 3, 1891, establishing a Court of Private Land Claims. The small holdings intended to be protected by the law are estimated to be more than fifteen thousand in number. The claimants are a most deserving class and their titles are supported by the strongest equities. The difficulty grows out of the fact that the lands have largely been surveyed according to our methods, while the holdings, many of which have been in the same family for generations, are laid out in narrow strips a few rods wide upon a stream and running back to the hills for pasturage and timber. Provision should be made for numbering these tracts as lots and for patenting them by such numbers, and without reference to section lines.

The administration of the Pension Bureau has been characterized during the year by great diligence. The total number of pensioners upon the roll on the 30th day of June, 1891, was 676,160. There were allowed during the fiscal year ending at that time 250,565 cases. Of this number, 102,387 were allowed under the law of June 27, 1890. The issuing of certificates has been proceeding at the rate of about 30,000 per month, about 75 per cent of these being cases under the new law. The Commissioner expresses the opinion that he will be able to carefully adjudicate and allow 350,000 claims during the present fiscal year. The appropriation for the payment of pensions for the fiscal year 1890-'91 was \$127,685,793.89 and the amount expended \$118,530,649.25, leaving an unexpended surplus of \$9,155,144.64.

The Commissioner is quite confident that there will be no call this year for a deficiency appropriation, notwithstanding the rapidity with which the work is being pushed. The mistake which has been made by many in their exaggerated estimates of the cost of pensions is in not taking account of the diminished value of first

payments under the recent legislation. These payments, under the general law, have been for many years very large, as the pensions, when allowed, dated from the time of filing the claim, and most of these claims had been pending for years. The first payments under the law of June, 1890, are relatively small, and, as the per cent of these cases increases and that of the old cases diminishes, the annual aggregate of first payments is largely reduced. The Commissioner, under date of November 13, furnishes me with the statement that during the last four months 113,175 certificates were issued, 27,893 under the general law and 85,282 under the act of June 27, 1890. The average first payment during these four months was \$131.85, while the average first payment upon cases allowed during the year ending June 30, 1891, was \$239.33, being a reduction in the average first payments during these four months of \$107.48.

The estimate for pension expenditures for the fiscal year ending June 30, 1893, is \$144,956,000, which, after a careful examination of the subject, the Commissioner is of the opinion will be sufficient. While these disbursements to the disabled soldiers of the great civil war are large, they do not realize the exaggerated estimates of those who oppose this beneficent legislation. The Secretary of the Interior shows with great fullness the care that is taken to exclude fraudulent claims, and also the gratifying fact that the persons to whom these pensions are going are men who rendered, not slight, but substantial war service.

The report of the Commissioner of Railroads shows that the total debt of the subsidized railroads to the United States was, on December 31, 1890, \$112,512,613.06. A large part of this debt is now fast approaching maturity, with no adequate provision for its payment. Some policy for dealing with this debt, with a view to its ultimate collection, should be at once adopted. It is very difficult, well-nigh impossible, for so large a body as the Congress to conduct the necessary negotiations and investigations. I therefore recommend that provision be made for the appointment of a commission to agree upon and report a plan for dealing with this debt.

The work of the Census Bureau is now far in advance and the great bulk of the enormous labor involved completed. It will be more strictly a statistical exhibit and less encumbered by essays than its immediate predecessors. The methods pursued have been fair, careful, and intelligent, and have secured the approval of the statisticians, who have followed them with a scientific and non-

partisan interest. The appropriations necessary to the early completion and publication of the authorized volumes should be given in time to secure against delays, which increase the cost and at the same time diminish the value of the work.

The report of the Secretary exhibits, with interesting fullness, the condition of the Territories. They have shared with the States the great increase in farm products and are bringing yearly large areas into cultivation by extending their irrigating canals. This work is being done by individuals or local corporations and without that system which a full preliminary survey of the water supply and of the irrigable lands would enable them to adopt. The future of the Territories of New Mexico, Arizona, and Utah in their material growth and in the increase, independence, and happiness of their people is very largely dependent upon wise and timely legislation, either by Congress or their own legislatures, regulating the distribution of the water supply furnished by their streams. If this matter is much longer neglected, private corporations will have unrestricted control of one of the elements of life and the patentees of the arid lands will be tenants at will of the water companies.

The United States should part with its ownership of the water sources and the sites for reservoirs, whether to the States and Territories or to individuals or corporations, only upon conditions that will insure to the settlers their proper water supply upon equal and reasonable terms. In the Territories this whole subject is under the full control of Congress, and in the States it is practically so as long as the Government holds the title to the reservoir sites and water sources and can grant them upon such conditions as it chooses to impose. The improvident granting of franchises of enormous value, without recompense to the State or municipality from which they proceed and without proper protection of the public interests, is the most noticeable and flagrant evil of modern legislation. This fault should not be committed in dealing with a subject that will, before many years, affect so vitally thousands of our people.

The legislation of Congress for the repression of polygamy has, after years of resistance on the part of the Mormons, at last brought them to the conclusion that resistance is unprofitable and unavailing. The power of Congress over this subject should not be surrendered until we have satisfactory evidence that the people of the State to be created would exercise the exclusive power of the State over this subject in the same way. The question is not whether these people now obey the laws of Congress against polygamy, but

rather would they make, enforce, and maintain such laws themselves if absolutely free to regulate the subject? We can not afford to experiment with this subject, for when a State is once constituted the act is final and any mistake irretrievable. No compact in the enabling act could, in my opinion, be binding or effective.

I recommend that provision be made for the organization of a simple form of town government in Alaska, with power to regulate such matters as are usually in the States under municipal control. These local civil organizations will give better protection in some matters than the present skeleton Territorial organization. Proper restrictions as to the power to levy taxes and to create debt should be imposed.

If the establishment of the Department of Agriculture was regarded by anyone as a mere concession to the unenlightened demand of a worthy class of people, that impression has been most effectually removed by the great results already attained. Its home influence has been very great in disseminating agricultural and horticultural information; in stimulating and directing a further diversification of crops; in detecting and eradicating diseases of domestic animals; and, more than all, in the close and informal contact which it has established and maintains with the farmers and stock-raisers of the whole country. Every request for information has had prompt attention and every suggestion merited consideration. The scientific corps of the Department is of a high order and is pushing its investigations with method and enthusiasm.

The inspection by this Department of cattle and pork products intended for shipment abroad has been the basis of the success which has attended our efforts to secure the removal of the restrictions maintained by the European governments.

For ten years protests and petitions upon this subject from the packers and stock-raisers of the United States have been directed against these restrictions, which so seriously limited our markets and curtailed the profits of the farm. It is a source of general congratulation that success has at last been attained, for the effects of an enlarged foreign market for these meats will be felt, not only by the farmer, but in our public finances and in every branch of trade. It is particularly fortunate that the increased demand for food products, resulting from the removal of the restrictions upon our meats and from the reciprocal trade arrangements to which I have referred, should have come at a time when the agricultural surplus is so large. *Without the help thus derived, lower*

prices would have prevailed. The Secretary of Agriculture estimates that the restrictions upon the importation of our pork products into Europe lost us a market for \$20,000,000 worth of these products annually.

The grain crop of this year was the largest in our history, 50 per cent greater than that of last year, and yet the new markets that have been opened and the larger demand resulting from short crops in Europe have sustained prices to such an extent that the enormous surplus of meats and breadstuffs will be marketed at good prices, bringing relief and prosperity to an industry that was much depressed. The value of the grain crop of the United States is estimated by the Secretary to be this year five hundred million dollars more than last; of meats, one hundred and fifty millions more, and of all products of the farm, seven hundred millions more. It is not inappropriate, I think, here to suggest that our satisfaction in the contemplation of this marvelous addition to the national wealth is unclouded by any suspicion of the currency by which it is measured and in which the farmer is paid for the product of his fields.

The report of the Civil Service Commission should receive the careful attention of the opponents, as well as the friends, of this reform. The Commission invites a personal inspection by Senators and Representatives of its records and methods; and every fair critic will feel that such an examination should precede a judgment of condemnation, either of the system or its administration. It is not claimed that either is perfect, but I believe that the law is being executed with impartiality, and that the system is incomparably better and fairer than that of appointments upon favor. I have during the year extended the classified service to include superintendents, teachers, matrons, and physicians in the Indian service. This branch of the service is largely related to educational and philanthropic work and will obviously be the better for the change.

The heads of the several Executive Departments have been directed to establish at once an efficiency record as the basis of a comparative rating of the clerks within the classified service, with a view to placing promotions therein upon the basis of merit. I am confident that such a record, fairly kept and open to the inspection of those interested, will powerfully stimulate the work of the Departments and will be accepted by all as placing the troublesome matter of promotions upon a just basis.

I recommend that the appropriations for the Civil Service Commission be made adequate to the increased work of the next fiscal year.

I have twice before urgently called the attention of Congress to the necessity of legislation for the protection of the lives of railroad employees, but nothing has yet been done. During the year ending June 30, 1890, 369 brakemen were killed and 7,841 maimed while engaged in coupling cars. The total number of railroad employees killed during the year was 2,451, and the number injured, 22,390. This is a cruel and largely a needless sacrifice. The Government is spending nearly one million dollars annually to save the lives of shipwrecked seamen; every steam vessel is rigidly inspected and required to adopt the most approved safety appliances. All this is good; but how shall we excuse the lack of interest and effort in behalf of this army of brave young men who in our land commerce are being sacrificed every year by the continued use of antiquated and dangerous appliances? A law requiring of every railroad engaged in interstate commerce the equipment each year of a given per cent of its freight cars with automatic couplers and air brakes would compel an agreement between the roads as to the kind of brakes and couplers to be used and would very soon and very greatly reduce the present fearful death rate among railroad employees.

The method of appointment by the States of electors of President and Vice President has recently attracted renewed interest by reason of a departure by the State of Michigan from the method which had become uniform in all the States. Prior to 1832 various methods had been used by the different States and even by the same State. In some the choice was made by the legislature; in others electors were chosen by districts, but more generally by the voters of the whole State upon a general ticket. The movement towards the adoption of the last-named method had an early beginning and went steadily forward among the States, until in 1832 there remained but a single State, South Carolina, that had not adopted it. That State, until the civil war, continued to choose its electors by a vote of the legislature, but after the war changed its method and conformed to the practice of the other States. For nearly sixty years all the States save one have appointed their electors by a popular vote upon a general ticket, and for nearly thirty years this method was universal.

After a full test of other methods, without important division or dissent in any State and without any purpose of party advantage, as we must believe, but solely upon the considerations that uniformity was desirable and that a general election in territorial divisions not subject to change was most consistent with the popular character

of our institutions, best preserved the equality of the voters, and perfectly removed the choice of President from the baneful influence of the "gerrymander," the practice of all the States was brought into harmony. That this concurrence should now be broken is, I think, an unfortunate and even a threatening episode, and one that may well suggest whether the States that still give their approval to the old and prevailing method ought not to secure, by a constitutional amendment, a practice which has had the approval of all. The recent Michigan legislation provides for choosing what are popularly known as the Congressional electors for President by Congressional districts, and the two Senatorial electors by districts created for that purpose. This legislation was, of course, accompanied by a new Congressional apportionment and the two statutes bring the electoral vote of the State under the influence of the "gerrymander."

These gerrymanders for Congressional purposes are in most cases buttressed by a gerrymander of the legislative districts, thus making it impossible for a majority of the legal voters of the State to correct the apportionment and equalize the Congressional districts. A minority rule is established that only a political convulsion can overthrow. I have recently been advised that in one county of a certain State three districts for the election of members of the legislature are constituted as follows: One has 65,000 population; one, 15,000, and one, 10,000; while in another county, detached, non-contiguous sections have been united to make a legislative district. These methods have already found effective application to the choice of Senators and Representatives in Congress, and now an evil start has been made in the direction of applying them to the choice by the States of electors of President and Vice President. If this is accomplished, we shall then have the three great departments of the Government in the grasp of the "gerrymander," the legislative and executive directly and the judiciary indirectly through the power of appointment.

An election implies a body of electors having prescribed qualifications, each one of whom has an equal value and influence in determining the result. So when the Constitution provides that "each State shall appoint" (elect), "in such manner as the legislature thereof may direct, a number of electors," etc., an unrestricted power was not given to the legislatures in the selection of the methods to be used. "A republican form of government" is guaranteed by the Constitution to each State, and the power given by the same instrument to the legislatures of the States to prescribe methods for the choice, by the State, of electors must be exercised under that limitation. The essential features of such a

government are the right of the people to choose their own officers and the nearest practicable equality of value in the suffrages given in determining that choice.

It will not be claimed that the power given to the legislature would support a law providing that the persons receiving the smallest vote should be the electors or a law that all the electors should be chosen by the voters of a single Congressional district. The State is to choose, and, under the pretense of regulating methods, the legislature can neither vest the right of choice elsewhere nor adopt methods not conformable to republican institutions. It is not my purpose here to discuss the question whether a choice by the legislature or by the voters of equal single districts is a choice by the State, but only to recommend such regulation of this matter by constitutional amendment as will secure uniformity and prevent that disgraceful partisan jugglery to which such a liberty of choice, if it exists, offers a temptation.

Nothing just now is more important than to provide every guaranty for the absolutely fair and free choice by an equal suffrage, within the respective States, of all the officers of the National Government, whether that suffrage is applied directly, as in the choice of Members of the House of Representatives, or indirectly, as in the choice of Senators and electors of President. Respect for public officers and obedience to law will not cease to be the characteristics of our people until our elections cease to declare the will of majorities fairly ascertained, without fraud, suppression, or gerrymander. If I were called upon to declare wherein our chief national danger lies, I should say, without hesitation, in the overthrow of majority control by the suppression or perversion of the popular suffrage. That there is a real danger here all must agree, but the energies of those who see it have been chiefly expended in trying to fix responsibility upon the opposite party, rather than in efforts to make such practices impossible by either party.

Is it not possible now to adjourn that interminable and inconclusive debate while we take, by consent, one step in the direction of reform by eliminating the gerrymander, which has been denounced by all parties, as an influence in the selection of electors of President and members of Congress? All the States have, acting freely and separately, determined that the choice of electors by a general ticket is the wisest and safest method, and it would seem there could be no objection to a constitutional amendment making that method permanent. If a legislature chosen in one year upon purely local questions should, pending a Presidential contest, meet, rescind the law for a choice *upon a general ticket*, and provide for

the choice of electors by the legislature, and this trick should determine the result, it is not too much to say that the public peace might be seriously and widely endangered.

I have alluded to the "gerrymander" as affecting the method of selecting electors of President by Congressional districts, but the primary intent and effect of this form of political robbery have relation to the selection of Members of the House of Representatives. The power of Congress is ample to deal with this threatening and intolerable abuse. The unfailing test of sincerity in election reform will be found in a willingness to confer as to remedies and to put into force such measures as will most effectually preserve the right of the people to free and equal representation.

An attempt was made in the last Congress to bring to bear the constitutional powers of the General Government for the correction of frauds against the suffrage. It is important to know whether the opposition to such measures is really rested in particular features supposed to be objectionable or includes any proposition to give to the election laws of the United States adequacy to the correction of grave and acknowledged evils. I must yet entertain the hope that it is possible to secure a calm, patriotic consideration of such constitutional or statutory changes as may be necessary to secure the choice of the officers of the Government to the people by fair apportionments and free elections.

I believe it would be possible to constitute a commission, non-partisan in its membership and composed of patriotic, wise, and impartial men, to whom a consideration of the question of the evils connected with our election system and methods might be committed with a good prospect of securing unanimity in some plan for removing or mitigating those evils. The Constitution would permit the selection of the commission to be vested in the Supreme Court, if that method would give the best guaranty of impartiality.

This commission should be charged with the duty of inquiring into the whole subject of the law of elections as related to the choice of officers of the National Government, with a view to securing to every elector a free and unmolested exercise of the suffrage and as near an approach to an equality of value in each ballot cast as is attainable.

While the policies of the General Government upon the tariff, upon the restoration of our merchant marine, upon river and harbor improvements, and other such matters of grave and general concern are liable to be turned this way or that by the results of Congressional elections, and administrative policies, sometimes involving issues that tend to peace or war, to be turned this way or

that by the results of a Presidential election, there is a rightful interest in all the States and in every Congressional district that will not be deceived or silenced by the audacious pretense that the question of the right of any body of legal voters in any State or in any Congressional district to give their suffrages freely upon these general questions is a matter only of local concern or control. The demand that the limitations of suffrage shall be found in the law, and only there, is a just demand, and no just man should resent or resist it. My appeal is, and must continue to be, for a consultation that shall "proceed with candor, calmness, and patience upon the lines of justice and humanity, not of prejudice and cruelty."

To the consideration of these very grave questions I invite not only the attention of Congress, but that of all patriotic citizens. We must not entertain the delusion that our people have ceased to regard a free ballot and equal representation as the price of their allegiance to laws and to civil magistrates.

I have been greatly rejoiced to notice many evidences of the increased unification of our people and of a revived national spirit. The vista that now opens to us is wider and more glorious than ever before. Gratification and amazement struggle for supremacy as we contemplate the population, wealth, and moral strength of our country. A trust, momentous in its influence upon our people and upon the world, is for a brief time committed to us, and we must not be faithless to its first condition—the defense of the free and equal influence of the people in the choice of public officers and in the control of public affairs.

BENJ. HARRISON.

EXECUTIVE MANSION,
December 9, 1891.

ANNUAL REPORT ON THE FINANCES.

TREASURY DEPARTMENT,
Washington, D. C., December 7, 1891.

SIR: I have the honor to submit the following report:

RECEIPTS AND EXPENDITURES.

Fiscal year 1891.

The revenues of the Government from all sources for the fiscal year ended June 30, 1891, were:

From customs.....	\$219,522,205 23
From internal revenue.....	145,686,249 44
From profits on coinage, bullion deposits, and assays.....	7,701,891 82
From sales of public lands.....	4,029,535 41
From fees—consular, letters-patent, and land.....	3,019,781 84
From sinking-fund for Pacific railways.....	2,326,359 37
From tax on national banks.....	1,236,042 60
From customs fees, fines, penalties, and forfeitures.....	966,121 82
From repayment of interest by Pacific railways.....	823,904 04
From sales of Indian lands.....	602,545 38
From Soldiers' Home, permanent fund.....	308,648 34
From tax on seal-skins.....	269,673 88
From immigrant fund.....	292,271 00
From sales of Government property.....	259,379 05
From deposits for surveying public lands.....	131,422 80
From Nashville and Chattanooga Railroad Company.....	500,000 00
From sales of ordnance material.....	122,668 01
From sales of condemned naval vessels.....	78,037 36
From depredations on public lands.....	55,905 83
From the District of Columbia.....	2,853,897 74
From miscellaneous sources.....	1,825,806 35
From postal service.....	65,931,785 72
Total receipts.....	458,544,233 03

The expenditures for the same period were:

For the civil establishment, including foreign intercourse, public buildings, collecting the revenues, deficiency in postal revenues, rebate of tax on tobacco, refund of direct taxes, French spoliation claims, District of Columbia, and other miscellaneous expenses.....	\$110,048,167 49
For the military establishment, including rivers and harbors, forts, arsenals, and sea-coast defenses.....	48,720,065 01
For the naval establishment, including construction of new vessels, machinery, armament, equipment, and improvement at navy-yards..	26,113,896 46
For Indian service.....	8,527,469 01
For pensions.....	124,415,951 40
For interest on the public debt.....	37,547,135 37
For postal service.....	65,931,785 72
Total expenditures.....	421,304,470 46
Leaving a surplus of.....	37,239,762 57

To this sum was added \$54,207,975.75, deposited in the Treasury under the act of July 14, 1890, for the redemption of national bank notes; \$9,363,715 deposited during the year on the same account; \$3,810 re-received for four per cent. bonds issued for interest accrued on refunding certificates converted during the year, and \$34,132,372.16 taken from the cash balance in the Treasury, making a total of \$134,947,635.48, which was applied to the payment of the public debt, as follows:

Redemption of—

Bonds, fractional currency, and notes for the sinking-fund, including \$3,860,086.28 premium paid on bonds	\$47,866,197 65
Loan of 1847	300 00
Loan of July and August, 1861.....	21,100 00
Loan of 1863	100 00
Loan of 1863, continued	300 00
Five-twenties of 1862.....	150 00
Five-twenties of June, 1864.....	10,650 00
Consols of 1865	15,850 00
Consols of 1867.....	35,450 00
Consols of 1868.....	20,050 00
Ten-forties of 1864.....	11,500 00
Funded loan of 1881.....	5,000 00
Funded loan of 1881, continued	7,800 00
Loan of 1882.....	60,200 00
Bounty land scrip.....	100 00
Old demand, compound interest, and other notes.....	5,055 00
National bank notes.....	23,553,298 50
Purchase of—	
Funded loan of 1891	30,286,150 00
Funded loan of 1907	26,507,250 00
Premium on funded loan of 1891	135 99
Premium on funded loan of 1907.....	6,540,998 34

Total..... 134,947,635 48

As compared with the fiscal year 1890, the receipts for 1891 have fallen off \$5,418,847.52, as follows:

Source.	Increase.	Decrease.	Net decrease.
Postal service.....	\$5,049,687 80		
Internal revenue.....	3,079,543 63		
Nashville & Chattanooga R. R. Co.....	500,000 00		
Sinking-fund for Pacific railways.....	483,794 85		
Sales of Indian lands.....	230,257 23		
Repayment of interest by Pacific railways.....	118,212 52		
Consular fees.....	112,186 47		
Sales of ordnance material.....	82,301 71		
Sales of condemned naval vessels.....	77,096 89		
Sales of Government property.....	67,253 06		
Immigrant fund.....	50,807 00		
Revenues of the District of Columbia.....	44,766 81		
Depredations on public lands.....	20,653 46		
Deposits for surveying public lands	19,108 01		
Tax on seal-skins.....	7,173 88		
Miscellaneous items.....	260,899 66		
Customs.....		\$10,146,879 34	
Profits on coinage, assays, etc.....		2,515,252 43	
Sales of public lands.....		2,328,737 10	
Registers' and receivers' fees.....		196,730 03	
Custom-house fees.....		179,885 43	
Customs emolument fees.....		129,118 65	
Tax on national banks.....		68,283 98	
Fees on letters-patent.....		42,365 92	
Customs fines, penalties, etc.....		24,198 42	
Total	10,209,103 98	15,627,951 50	\$5,418,847 52

REPORT OF THE SECRETARY OF THE TREASURY.

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There was an increase of \$57,636,198.14 in the ordinary expenditures, as follows:

Source.	Increase.	Decrease.	Net increase.
CIVIL ESTABLISHMENT.			
Legislative—			
Salaries and expenses.....	\$486,874 00		
Department of State—			
Salaries and expenses.....	16,542 00		
Foreign intercourse.....	880,489 00		
Treasury Department—			
Salaries and contingent expenses.....	92,556 00		
Independent Treasury.....	35,062 00		
Mints and assay offices.....	45,711 00		
Territorial governments.....	189,948 00		
Salaries and expenses, internal revenue.....	832,645 00		
Rebate of tax on tobacco.....	770,082 00		
Refund of direct taxes.....	11,521,497 00		
Repayment to importers excess of deposits.....	8,089,763 00		
Debentures or drawbacks, customs.....	1,983,830 00		
Miscellaneous items, customs.....	44,611 00		
Light-house establishment.....	102,646 00		
Coast and Geodetic Survey.....	30,062 00		
Bureau of Engraving and Printing.....	87,688 00		
Court-houses, custom-houses, etc.....	433,872 00		
Staking fund, Pacific railroads.....	476,443 00		
Expenses of Treasury notes of 1890.....	218,368 00		
World's Columbian Exposition.....	169,378 00		
French spoliation claims.....	1,085,240 00		
Miscellaneous items.....	305,780 00		
Navy Department—			
Salaries and expenses.....	21,796 00		
Interior Department—			
Salaries and expenses.....	357,559 00		
Public lands service.....	462,401 00		
Expenses of Eleventh Census.....	4,938,538 00		
Colleges for agriculture and mechanic arts.....	1,081,000 00		
Post-Office Department—			
Salaries and expenses.....	25,445 00		
Department of Agriculture—			
Salaries and expenses.....	184,851 00		
Department of Labor—			
Salaries and expenses.....	5,757 00		
Department of Justice—			
Salaries and expenses.....	39,220 00		
Fees of supervisors of elections.....	371,353 00		
Special deputy marshals at elections.....	34,785 00		
Judgments, U. S. Courts.....	60,691 00		
Salaries and expenses, U. S. Courts.....	1,398,298 00		
Executive Proper—			
Salaries and expenses.....		\$11,618 00	
District of Columbia—			
Salaries and expenses.....		41,909 00	
War Department—			
Salaries and expenses.....		6,465 00	
Post-Office Department—			
Postal Service.....		2,029,373 00	
Total Civil Establishment.....	30,729,306 00	2,084,395 00	\$28,644,911 00
MILITARY ESTABLISHMENT.			
Pay of the Army.....	378,728 00		
Pay and bounty claims.....	531,651 00		
Subsistence of the Army.....	203,494 00		
Transportation of the Army.....	613,169 00		
Regular supplies, incidentals, etc.....	178,940 00		
Ordnance service.....	195,634 00		
Forts and fortifications.....	208,680 00		
Rivers and harbors.....	513,189 00		
Signal Service.....	177,327 00		
Artificial limbs and appliances.....	327,117 00		
Official records of the rebellion.....	98,794 00		
Homes for disabled volunteer soldiers.....	548,569 00		
Damages by improvement of rivers.....	158,294 00		
Funding to States war expenses.....	210,236 00		
Supplies taken by the Army (Bowman act).....	75,482 00		
Miscellaneous items.....	93,473 93		
Medical department.....		32,690 00	
Military posts.....		207,880 00	
Relief of sufferers from flood.....		135,000 00	
Total Military Establishment.....	4,512,766 93	375,510 00	4,137,256 93

Increase in ordinary expenditures—Continued.

Source.	Increase.	Decrease.	Net increase.
NAVAL ESTABLISHMENT.			
Naval Academy.....	\$80,478 00		
Increase of the Navy.....	3,777,394 00		
Bureau of Yards and Docks.....	76,297 00		
Bureau of Equipment.....	648,992 00		
Bureau of Construction and Repairs.....	279,043 00		
Bureau of Ordnance.....	91,060 00		
Bureau of Steam Engineering.....	8,792 00		
Bureau of Medicine and Surgery.....	27,327 00		
General account of advances.....	100,619 00		
Mileage (Graham decision).....	72,060 00		
Contingencies of the Navy.....	47,774 00		
Miscellaneous, reliefs, etc.....	165,270 22		
Marine Corps.....		\$28,679 00	
Navy-yards and stations.....		381,202 00	
Bureau of Navigation.....		34,102 00	
Bureau of Provisions and Clothing.....		339,577 00	
Pay of the Navy.....		464,756 00	
Total Naval Establishment.....	5,356,006 22	1,248,316 00	\$4,107,690 22
Indian service.....			1,819,422 84
Pensions.....			17,479,096 33
Interest on the public debt.....			1,447,861 33
Total net increase.....			57,636,196 14

Fiscal year 1892.

For the present fiscal year the revenues are estimated as follows:

From customs.....	\$185,000,000 00
From internal revenue.....	152,000,000 00
From miscellaneous sources.....	25,000,000 00
From postal service.....	71,000,000 00
Total estimated revenues.....	433,000,000 00

The expenditures for the same period are estimated as follows:

For the civil establishment.....	\$100,000,000 00
For the military establishment.....	46,000,000 00
For the naval establishment.....	32,000,000 00
For the Indian service.....	12,000,000 00
For pensions.....	125,000,000 00
For interest on the public debt.....	23,000,000 00
For postal service.....	71,000,000 00
Total estimated expenditures.....	409,000,000 00
Leaving an estimated surplus for the year of.....	24,000,000 00

The following is a statement of the probable condition of the Treasury at the close of the present fiscal year, June 30, 1892:

Cash in the Treasury July 1, 1891, including gold reserve.....	\$153,893,808 83
Surplus for year, as above.....	24,000,000 00
Deposits during the year for redemption of national bank notes.....	3,000,000 00
Total amount available.....	180,893,808 83
Less—	
Redemption of national bank notes during the year.....	\$16,000,000 00
Redemption of bonds, interest notes, and fractional currency to November 1, 1891.....	20,911,163 00
Redemption of same items during remainder of year.....	4,254,500 00
	41,165,663 00
Cash balance available June 30, 1892.....	139,728,145 83

Fiscal year 1893.

It is estimated that the revenues of the Government for the fiscal year 1893 will be:

From customs.....	\$195,000,000 00
From internal revenue.....	158,000,000 00
From miscellaneous sources.....	22,000,000 00
From postal service.....	80,336,350 44

Total estimated revenues..... 455,336,350 44

The estimates of appropriations required for the same period, as submitted by the several Executive Departments and offices, are as follows:

Legislative establishment.....	\$3,492,089 95
Executive establishment—	
Executive proper.....	\$143,850 00
State Department.....	166,510 00
Treasury Department.....	9,108,386 10
War Department.....	2,247,178 00
Navy Department.....	416,920 00
Interior Department.....	5,202,924 00
Post-Office Department.....	923,360 00
Department of Agriculture.....	3,360,995 50
Department of Justice.....	184,750 00
Department of Labor.....	175,470 00
	21,930,343 60
Judicial establishment.....	692,600 00
Foreign intercourse.....	2,138,466 14
Military establishment.....	26,299,170 77
Naval establishment.....	26,365,654 75
Indian affairs.....	8,603,907 76
Pensions.....	147,064,550 00
Public Works—	
Legislative.....	1,041,885 00
Treasury Department.....	3,125,479 95
War Department.....	13,208,393 00
Navy Department.....	828,985 05
Interior Department.....	290,665 00
Department of Justice.....	5,800 00
	18,501,208 00
Miscellaneous—	
Legislative.....	3,076,141 86
State Department.....	3,000 00
Treasury Department.....	9,779,084 90
War Department.....	5,501,861 60
Interior Department.....	3,928,821 00
Department of Justice.....	4,765,787 60
District of Columbia.....	5,602,125 17
	32,656,822 13
Postal service.....	80,323,400 51
Permanent annual appropriations—	
Interest on the public debt.....	26,000,000 00
Refunding—customs, internal revenue, etc.....	17,431,200 00
Collecting revenue from customs.....	5,500,000 00
Miscellaneous.....	24,300,680 00
	73,231,880 00
Total estimated appropriations, exclusive of sinking-fund.....	441,300,093 61
Or an estimated surplus of.....	14,036,256 83

SINKING FUND.

The requirements of the sinking fund for the current fiscal year are estimated at \$48,913,025. The applications to the fund to November 1, 1891, consisted of bonds, interest notes, and fractional currency amounting to \$20,911,163. The additional application of similar items of indebtedness during the remainder of the year, and of national bank notes redeemed under the provisions of the act of July 14, 1890, in excess of deposits received during the year for the redemption of such notes, estimated at \$4,254,500 and \$13,000,000, respectively, will bring the total amount to be applied to the fund to within \$10,747,362 of the estimated requirement.

THE FOUR AND ONE-HALF PER CENT. LOAN.

The original issue of 4½ per cent. bonds, authorized by the acts of July 14, 1870, and January 20, 1871, consisted of \$131,596,150 registered and \$118,403,850 coupon bonds.

During the fifteen years' existence of the loan there were received and canceled \$77,480,700 coupon bonds for which an equal amount of registered bonds was issued, and there were retired by purchase or redemption prior to April 1, 1891, \$168,039,300 registered and \$28,106,450 coupon bonds. The amount outstanding April 1, was, therefore, \$53,854,250, of which \$41,037,550 were registered and \$12,816,700 coupon bonds. These by their terms were redeemable at the pleasure of the United States after September 1, 1891, and were being received for redemption, with interest to that date, in pursuance of a circular issued by my predecessor October 9, 1890. The bonds so redeemed were paid from the surplus revenues, under section 2 of the act of March 3, 1881, the sinking fund for the current year having been completed by purchases and redemptions of 4 per cent. and 4½ per cent. bonds during July and August, 1890.

In view of the requirements of the sinking fund for the fiscal year 1892, it was deemed advisable to suspend the redemption of 4½ per cent. bonds until after that year should begin, and a circular was therefore published, under date of April 25, 1891, rescinding that under which the bonds were then being redeemed and reserving the residue of the 4½ per cent. loan for adjustment within the fiscal year 1892. There had been presented for redemption in April, prior to the issuance of the circular above mentioned, \$2,985,050, and the amount outstanding subject to settlement at the option of the Government after September 1, 1891, was therefore \$50,869,200, consisting of \$39,202,300 registered and \$11,666,900 coupon bonds.

Nearly twenty-six and one-half millions of the registered bonds were deposited with the Treasurer of the United States as security for circulation and public moneys, and many of the banks to which they belonged would be obliged to replace them with other bonds at great expense or go into liquidation whenever it should be necessary that the 4½ per cents be surrendered. It was apparent, therefore, that an unqualified call for the redemption of the loan, fixing its maturity in September, would project a disturbing element into the finances of the country at a time when its resources are usually severely taxed by the movement of agricultural products. In the desire to avoid monetary disturbance during this critical period, and in the hope that the volume of money in circulation might be increased at an opportune time, through the coöperation of the banks, the holders of the bonds were offered their choice of presenting them for redemption with interest to September 2, 1891, or for continuance at the pleasure of the Government with interest at 2 per cent. per annum after that date. Under this proposal there were presented prior to September 2 for continuance \$23,414,000, of which \$20,007,100 were deposited with the Treasurer of the United States as security for circulation and \$2,158,000 for deposits. But it was found that some owners of 4½ per cent. bonds who desired their continuance were unable to take the necessary steps to that end within the prescribed time, and an extension of the time to September 30 was therefore granted. On that day the total amount of bonds which had been presented for continuance was \$25,412,200, leaving for redemption \$25,457,000, of which \$17,940,100 were presented and paid during the month of September. There were also redeemed in that month, to correct an error made by the owner, \$47,700 continued bonds, and the amount now outstanding on interest at 2 per cent. is \$25,364,500.

PUBLIC MONEYS.

The monetary transactions of the Government have been conducted through the Treasurer of the United States, nine sub-treasury officers, and two hundred and thirteen national bank depositories. The number of such depositories on November 1, 1891, was one hundred and eighty-three, and the amount of public moneys held by them on that date, including those to credit of the Treasurer's general account and United States disbursing officers, was \$20,106,876.92, a reduction since November 1, 1890, in number of twenty-one, and in amount of holdings of \$9,830,810.76.

These withdrawals have been made from locations where public funds were held in excess of the requirements of the service, and gradually,

in order to avoid disturbing the business of the people. Further withdrawals will be made from time to time when it can be done without detriment to business interests until the holdings of national bank depositaries shall have been reduced to the amount needed for the proper transaction of public business.

CIRCULATION.

This important subject has been unusually prominent since the last annual report. The stringency in the money market during the summer and autumn of 1890 was relieved by the prompt and effective measures of my predecessor, and happily disappeared without producing the grave consequences which were feared by the public; but its existence, and the widespread apprehension which it caused, induced a revival of the erroneous idea that the volume of money in circulation was not only inadequate to the needs of the country, but was very much less per capita than during the so-called flush times which followed the civil war.

The "circulation statement" which has been published by the Department monthly since April 1, 1887, contains in tabular form full information on this subject for the dates specified, and has proved to be a valuable addition to the regular reports of the Department; but in the absence of statements in the same form for the preceding years a comparison by the people has been impracticable, and the mistaken opinion that there has been a severe contraction of the money volume found ready acceptance. This fact became apparent through letters which were received from all sections of the country, and more complete information on the subject was accordingly supplied by means of a statement which was printed in August last, and has been sent by mail to those who ask for it. The tables therein published appear in their appropriate place in this report,* and are reproduced without change, except as to the table for July 1, 1891, which displays the revised figures for that date, including bullion in the Treasury. By the revision of these figures, the amount of money per capita July 1, 1891, has been found to be \$23.41, instead of \$23.45.

The amount of money in circulation has been very largely increased since the close of the fiscal year. The amount July 1, 1891, was \$1,497,440,707, and the amount per capita was \$23.41. The return of gold to the United States, the operation of the Silver Act of July 14, 1890, and disbursements by the Treasury on account of the four and one-half per cent. loan, pensions, etc., have enlarged the volume to \$1,577,262,070, and the per capita amount to \$24.38. The amount of each kind of money in the United States, including bullion in the

* See Table I, page civ.

Treasury and the amounts in circulation December 1, 1891, are shown in the subjoined table:

December 1, 1891.

[Population, 64,690,000; circulation per capita, \$24.38.]

	General stock coined or is- sued.	In Treasury.	Amount in cir- culation.
Gold coin, including bullion in Treasury.....	\$577,774,595	\$271,843,193	\$405,931,402
Standard silver dollars, including bullion in Treas- ury.....	451,205,900	398,308,756	62,897,204
Subsidiary silver.....	77,235,022	14,399,585	62,845,437
Gold certificates.....	161,852,139	19,212,170	142,649,969
Silver certificates.....	324,274,918	3,401,308	320,873,610
Treasury notes, act July 14, 1890.....	72,959,652	1,976,366	70,983,286
United States notes.....	346,681,016	13,816,707	333,364,309
Currency certificates, act June 8, 1872.....	10,135,000	370,000	9,765,000
National bank notes.....	172,993,607	4,541,754	168,151,853
	2,305,111,909	727,849,839	1,577,262,070

PRECIOUS METALS.

Deposits and purchases.

The value of the gold deposited at the mints and assay offices during the fiscal year 1891, was \$59,625,678.08, of which \$48,485,800.82 were original deposits, and \$11,139,877.26 were redeposits.

Of the original deposits, \$31,555,116.85 were the product of our own mines; \$12,311,126.66 foreign gold coin and bullion; \$583,847.16 light weight domestic gold coin; and \$4,035,710.15 old material.

The deposits and purchases of silver aggregated 71,869,663.92 standard ounces, of the coining value of \$83,630,154.31, including 10,006,707.61 standard ounces, of the coining value of \$11,644,168.84, redeposits.

Of the silver received, 56,296,795.19 standard ounces, of the coining value of \$65,508,998.03, were classified as of domestic product; 4,154,244.81 standard ounces, of the coining value of \$4,834,030.31, were foreign silver bullion and coin; 705,253.82 standard ounces, of the coining value of \$820,658.98, were uncurrent domestic coins; 3,248.47 standard ounces, of the value of \$3,780.04, were trade dollars; and 703,414.02 standard ounces, of the coining value of \$818,518.11, consisted of old plate, jewelry, etc.

Coinage.

The coinage of the mints during the last fiscal year was the largest in the history of the mint in this country, aggregating 119,547,877 pieces, valued as follows:

Gold.....	\$24,172,202 50
Silver dollars.....	36,232,802 00
Subsidiary silver.....	2,039,218 35
Minor coins.....	1,166,836 50
Total.....	63,611,159 35

The number of silver dollars coined during the fiscal year from bullion purchased under the act of 1878 was 8,740,327; from bullion purchased under the act of July 14, 1890, 27,292,475; and from trade-dollar bullion, 200,000, a total of 36,232,802 silver dollars, upon which the seigniorage, or profit, was \$6,221,333.42. The profit on the subsidiary silver coinage of the year was \$92,434.48, a total seigniorage of \$6,313,767.90.

The total coinage of silver dollars under the act of 1878, from March 1, 1878, to the close of such coinage, has been \$378,166,793.

The net profit on the coinage of silver during the thirteen years ended June 30, 1891, including the balances in the coinage mints on July 1, 1878, has aggregated \$71,952,390.25.

Bars.

In addition to the coinage, gold bars were manufactured of the value of \$31,165,541.77, and silver bars of the value of \$8,437,657.65, a total of \$39,603,199.42.

Purchases of silver.

The amount of silver purchased from July 1 to August 13, 1890, under the provisions of the act of February 28, 1878, aggregated 3,108,199.47 standard ounces, costing \$3,049,426.46, an average of \$1.09 per fine ounce.

The total amount of silver bullion purchased under the act of February 28, 1878, from the commencement, March 1, 1878, to the end, August 13, 1890, was 323,635,576.19 standard ounces, costing \$308,199,261.71, an average cost of \$1.058 per fine ounce.

The amount of silver purchased under the act of July 14, 1890, from August 13, 1890, to June 30, 1891, aggregated 53,770,125.61 standard ounces, costing \$50,577,498.44, an average cost of \$1.045 per fine ounce.

The total amount of silver purchased during the fiscal year under both acts—February 28, 1878, and July 14, 1890—was 56,878,325.08 standard ounces, costing \$53,626,924.90, an average cost of \$1.041 per fine ounce.

The total amount of silver purchased under the act of July 14, 1890, from August 13, 1890, to November 1, 1891, was 66,588,536 fine ounces costing \$68,626,565, an average cost of \$1.03 per fine ounce.

Recoinage of trade-dollar bullion.

The act of March 3, 1891, directed the Secretary of the Treasury to coin the trade-dollar bullion into silver dollars as soon as practicable. Under the act authorizing the redemption of trade dollars (March 3,

1887), it was left discretionary with the Secretary to coin this bullion into either silver dollars or subsidiary silver coins, and the discretion had been exercised in favor of subsidiary silver coins.

The balance of trade-dollar bullion on hand June 30, 1891, stored at the mints at Philadelphia and New Orleans, was 4,193,756.12 standard ounces, of the value of \$4,822,658.90.

As soon as the mandatory coinage of silver dollars, required by the act of July 14, 1890, ceased by limitation of law, the conversion of the trade-dollar bullion into silver dollars was commenced.

The total number of silver dollars coined from trade-dollar bullion to November 1, has been \$3,260,100. This coinage will be completed during the present calendar year.

Price of silver.

The price of silver fluctuated during the last fiscal year from \$0.964 to \$1.21 per fine ounce, a variation of nearly 25 cents an ounce.

At the commencement of the fiscal year the price in New York was \$1.05 per ounce; by July 14, 1890, the date of the passage of the new silver law, the price had advanced to \$1.08 per ounce, and by August 13, the date the new silver law was to take effect, to \$1.14 per ounce. The highest price reached in New York was on August 19, 1890—\$1.21 per fine ounce. In September a decline commenced, extending to the end of the calendar year, when the price had touched \$1.04½. The closing price, June 30, 1891, was \$1.01½ per fine ounce. The price at this date—November 1, 1891—is \$0.96.

The average price of silver during the year, based upon London quotations, was \$1.045 a fine ounce, and upon New York quotations, \$1.053 a fine ounce, an average difference of nearly 1 cent an ounce.

The exports of silver from London to India during the first nine months of the present calendar year show a falling off of \$17,020,730, over 50 per cent. as compared with the same months for the previous year.

Imports and exports.

The loss of gold by *net* export during the fiscal year was \$67,946,768, while there was a gain of silver by excess of imports over exports amounting to \$2,745,365.

The loss of gold by export was materially larger during the last fiscal year than in any recent year. The heavy movement commenced in February, 1891, and did not cease until the close of July. The total amount exported from the port of New York during this period was \$70,223,494.31.

It is gratifying to report that a return movement of gold is well under way, which has aggregated, since the 1st of July, at the port of New York alone, \$27,854,000, and it is believed that owing to the large exports of breadstuffs and other materials from the United States, this fall and winter, the movement of gold to this country will continue for some months, and in increasing amounts.

In the Report of the Director of the Mint will be found an article treating in detail of the movement of gold from the United States, and pointing out some of the causes which are believed to have operated to produce the same.

Earnings and expenditures.

The total expenditures for the support of the Mint Service for the last fiscal year aggregated \$1,335,910.

The total earnings of the mints and assay offices, from all sources, was \$7,650,529.62, and the total expenditures and losses of all kinds, \$1,661,139.83, a net profit of earnings over expenditures of \$5,989,389.79.

The product of gold and silver.

The mines of the United States produced, during the calendar year 1890, precious metals as follows:

	Fine ounces.	Commercial value.	Coining value.
Gold.....	1,588,880	\$32,845,000	\$32,845,000
Silver.....	54,500,000	57,225,000	70,464,645

The product of the mines and reduction works of the United States, including precious metals contained in foreign material reduced in the United States, was:

	Fine ounces.
Gold.....	1,838,366
Silver.....	64,920,927

The product of gold and silver in the world, based upon returns to the Director of the Mint, was the same year:

	Fine ounces.	Commercial value.	Coining value.
Gold.....	6,046,875	\$116,009,000	\$116,009,000
Silver.....	128,914,000	134,886,000	166,677,000

World's coinage.

The coinage of gold and silver by the various countries of the world aggregated, for the calendar year 1890, as far as reports have been received:

Gold	\$149,118,959
Silver	131,980,621

Metallic stock of the United States.

The stock of gold and silver in the United States, based upon official tabulations brought forward from year to year, was, on November 1, 1891, approximately:

Gold.....	\$671, 139, 531
Silver.....	539, 241, 624
Total.....	1, 210, 381, 155

Use of gold and silver in the arts and manufactures.

According to information gathered by the Bureau of the Mint, the value of the gold and silver used in the industrial arts in the United States during the last year was, approximately: Gold, \$18,000,000, and silver, \$9,000,000, of which \$10,700,000 gold and \$7,140,000 silver was new bullion.

Legislation recommended—Recoinage of uncurrent silver coins in the Treasury.

In the last report of the Secretary of the Treasury attention was directed to the large stock of subsidiary silver coins in the Treasury which, through abrasion or mutilation, were unfit for circulation, or else of denominations for which there was no popular demand, and it was recommended that authority be granted to recoin this uncurrent coin into new coins, and to reimburse the Treasury for the loss of metal incident to such recoinage from the large profits which have been made by the Government on the manufacture and issue of silver coins of a nominal value in excess of the cost of the bullion contained in them.

Such a provision was inserted by the House of Representatives in the sundry civil appropriation bill for the fiscal year 1892, but the provision was stricken out in the Senate, and, in lieu thereof, an appropriation of \$150,000 was made for such recoinage.

Under this liberal appropriation a large amount of uncurrent silver coins in the Treasury has been recoined into dimes and quarter-dollars, and such recoinage is still in progress.

The face value of the silver coins transferred from the Treasury to the mints for recoinage under this appropriation has been \$3,858,958, upon which the loss of metal, representing abrasion from wear, and reimbursed the Treasurer from the above appropriation, was \$115,055 a loss of about 3 per cent. It was thought that the loss would be about 5 per cent., and that the appropriation of \$150,000 would enable

the Department to recoin about \$3,000,000. By careful and economical work upon the part of the mints the loss has been reduced considerably below this figure, and it is believed that the current appropriation will enable the mints to recoin \$5,000,000.

The beneficial results of this recoinage are shown by the fact that the amount of subsidiary silver coin in the Treasury at the commencement of the last fiscal year, all of which was classed as an "unavailable asset," was \$22,805,225, while the amount in the Treasury at the present time is \$15,196,379, a reduction of \$7,608,846.

In view of the importance of relieving the Treasury of this incubus of uncurrent coins, as well as to provide change money in an attractive form, I renew the recommendation of my predecessor that authority be given to reimburse the Treasurer for the loss of metal incident to the recoinage of uncurrent silver coins in the Treasury, from the "silver profit fund," or else that a permanent annual appropriation for recoinage be made. If, however, this should not meet with favor at the hands of Congress, I most urgently recommend an immediate appropriation of \$100,000 for continuing the recoinage of uncurrent silver coins in the Treasury.

In pursuance of the authority contained in the act of September 26, 1891, the Director of the Mint has prepared new designs for the subsidiary silver coins of the United States, which are believed to be a decided improvement upon those now in existence, and with a liberal appropriation for recoinage it is believed that a large amount of uncurrent silver coins in the Treasury can be profitably converted into new coins bearing the new designs, and that they will be readily absorbed in circulation.

New mint at Philadelphia.

In accordance with the recommendation of Secretary Windom in his last annual report, Congress, by an act approved March 3, 1891, authorized the purchase of a site and the erection of a new building for the mint at Philadelphia, at a cost not to exceed \$2,000,000; but as the law made no appropriation to carry its provisions into effect, no action has been taken thereunder which would involve an expenditure of money from the Treasury.

At my request, however, Messrs. E. H. Fidler, Samuel Gustine Thompson, Anthony J. Drexel, William M. Singerly, James H. Windrim, Alexander K. McClure, and A. C. Bosbyshell consented to serve as a commission without compensation to recommend a suitable site for the proposed building, and on September 8, 1891, they unanimously recommended a site at a cost not to exceed \$800,000.

The necessity of better and enlarged facilities for the mint is apparent, and I again recommend the subject to the early and favorable consideration of Congress.

It is believed that the valuable site now occupied by the mint at Philadelphia will sell, at the date the new mint can be completed, for a sum approximating the entire cost of a new site and building.

NATIONAL BANKS.

The report of the Comptroller of the Currency* gives full information in relation to the organization, supervision, and liquidation of national banks during the year ending October 31, 1891. In this period 193 associations were organized, with capital aggregating \$20,700,000, thus exhibiting a growth of the national system largely in excess of the annual average for past years. During the same period 41 associations went into voluntary liquidation and 25 became insolvent, leaving as a net gain for the twelve-month 127 banks, with a capital of \$12,553,000.

The administration by the Comptroller of the affairs of suspended banks has been characterized by a wise regard to the interests of all concerned; and of the number of banks closed during the year, 7 have been reopened for business, their solvency having been restored by the voluntary contribution of funds by the stockholders.

The number of banks in operation October 31, 1891, was 3,694, having in capital stock \$684,755,865; bonds deposited to secure circulation, \$152,113,850; bank notes outstanding, \$171,368,948, including \$35,430,721 represented by lawful money deposited for their redemption. Their gross circulation, including notes of gold banks and those of failed and liquidated associations, has decreased \$7,571,085 during the year, while that secured by pledge of bonds has increased \$11,795,101.

The domestic exchange drawn by national banks for the year ending June 30, 1891, is stated at \$12,782,212,495, an increase over the preceding year of more than 11 per cent.

The last report of condition exhibits the liabilities and resources of the banks on September 25, 1891. At that date 3,677 associations reported an aggregate capital of \$677,426,870; surplus, \$227,576,486; and undivided profits, \$103,284,674. The gross deposits, including amounts due to banks, are stated at \$2,039,180,188.12, and loans and discounts at \$1,989,354,239, an increase in both items over any previous date. These banks held \$174,907,550 in United States bonds, of which \$150,035,600 were to secure circulating notes; also \$183,515,076 in specie, \$97,615,608 in legal-tender notes, and \$15,720,000 in United States certificates of deposit.

* See Appendix, page 318.

Of the new associations, 99 are located west of the Mississippi River and 59 in the southern states.

The present has been more disastrous than any former year as to the number of failures, but not as to the amount of capital and liabilities involved.

More than one-half in number of the banks that became insolvent during the period covered by the report of the Comptroller were located in two western states, and their insolvency was chiefly due to the effects of four successive crop failures, while the severe depression of business which followed the stringency of last year influenced in a great degree the failures that occurred in other parts of the country.

It is shown that of the total number of national banks organized only 34 per cent. have become insolvent during a period of 29 years, and that the annual average loss to creditors during that time has been only one-twentieth of 1 per cent. of their average liability.

The affairs of 102 insolvent banks have been finally closed, at an average expense of 9.28 per cent., with an average dividend to creditors of 74.17 per cent. Those closed during the last five years have divided among creditors 90.65 per cent., at an average cost for expenses of 4.08 per cent. It is believed that no other system can show equally favorable results.

I invite favorable attention to the recommendations of the Comptroller that the present law be so amended as to provide (1) that no association shall be required to maintain a bond deposit of more than \$1,000 to secure circulation; (2) that every association may issue circulating notes equal to the par value of the bonds so deposited; (3) that the monthly withdrawal of bonds pledged to secure such notes shall not exceed \$3,000,000 in the aggregate; and (4) that the semi-annual duty on circulation be so reduced as to equal one-fourth of 1 per cent.

Attention is also invited to the suggestions of the Comptroller that supervising and assistant examiners be appointed, and that all examiners be required to take an oath of office, and give such bonds as the Comptroller may prescribe. His suggestion as to the necessity for legislation more clearly defining the duties of directors, and further restricting the accommodations which may be lawfully afforded to officers and directors by way of loans and discounts, is especially commended to the consideration of the Congress.

Three loan and trust companies, doing business in the District of Columbia, have availed themselves of the provisions of an act of Congress entitled "An act to provide for the incorporation of trust, loan, mortgage, and certain other corporations within the District of Columbia," approved October 1, 1890, and are now subject to the supervision of the Comptroller of the Currency.

TARIFF AND CUSTOMS ADMINISTRATION.

At my request the Chief of the Bureau of Statistics has prepared a special report on our foreign commerce for comparative periods under the old and new tariffs, which furnishes a striking exhibit of the practical effect of the new law.

The existing tariff went into effect as to most of its provisions on the 1st of October, 1890. Under its operations during the twelve months ending September 30, 1891, the first five days of October being under the old tariff, the value of imports of merchandise was \$824,716,507, an increase of \$11,247,116 over the value of imports of the corresponding months of the preceding year. Of this total the value of free goods was \$397,352,107, an increase of \$118,092,436 over the value of free imports during the corresponding months of the previous year. The proportion of merchandise admitted free was 48.18 per cent. of the total importation, as against 34.32 per cent. for the preceding year, thus exceeding the proportion of free goods under any previous tariff for a corresponding period.

For the six months ending September 30, 1891, during which sugar has been admitted free, the proportion of free importations was 55.37 per cent., as against 33.27 per cent. for the corresponding months of the preceding year.

For six months ending March 31, 1891, when sugar was dutiable under the new tariff, the free importations were 40.68 per cent., and for the corresponding period of the preceding year, under the old tariff, they were 35.18 per cent. of the total importations.

The articles now admitted free of duty are chiefly necessities of life, such as sugar, tea, coffee, and other articles which are not largely produced in this country, and do not successfully compete with our domestic productions.

The removal of the duty on sugar has reduced its price to the consumer, and this result is not in conflict with the doctrine of protection to home industries, because the limited domestic production of sugar under the most favorable protective rates was not sufficient to influence the price in the home market.

The report of the Chief of the Bureau of Statistics is accompanied by tables showing that prices to the consumer of manufactured articles, as a rule, have not been increased, but have been reduced.

The receipts from customs for the year ending September 30, 1891, during the last six months of which sugar was free, were \$196,279,654.60, as against \$238,784,929.71 for the preceding year, a decrease of \$42,505,275.11.

During the twelve months ending September 30, the value of our exports of merchandise was \$923,091,136, as against \$860,177,115 for the previous twelve months, an increase of \$62,914,021.

Under the operations of the new tariff the customs revenue has been decreased as far as is consistent with the current needs of the Government. By the readjustment of duties in the line of protection to American labor and American industries, the free list has been enlarged by the addition of articles which from climatic or other conditions are not produced profitably, nor extensively, in this country; adequate protective duties have been imposed upon articles that come into competition with our own productions; new industries have been established and others stimulated, thereby giving increased employment to American labor, and better control of our home market to our own people; and the price of nearly every article of common consumption has been reduced to the consumer.

Inasmuch as a considerable portion of our revenues must be derived from duties on imports, it is the part of wisdom and patriotism to so adjust the rates as to have regard first to the interests of our own people and the rightful demands of American labor for remunerative wages.

I do not believe that any considerable number of the people desire to see our manufacturing industries destroyed, or wages reduced to the European basis, which would be the inevitable result of a reduction of duties with a view to revenue only.

A comparison of the prices of goods imported respectively under the old and new tariffs where rates have been increased will demonstrate that the tariff is a tax upon the foreign competitor in our markets in the sale of such articles as are extensively produced here, and that the duties are in fact thus deducted from the foreign market value, and are paid by the foreigner as a tax for the privilege of selling his goods here at prices fixed by our own people competing among themselves in their own market.

Legislation recommended.

I invite attention to, and earnestly renew, the recommendations of my predecessor concerning needed amendments to the laws relating to the administration of the customs service. I quote from his last annual report:

First. The increase of the permanent appropriation for the expense of collecting the revenue from customs.

For many years the fund available for defraying the expenses of collecting the revenue from customs has been insufficient to cover such expenses, and the Department

has been unable to employ a sufficient force to properly collect the revenue and guard against evasions. It is false economy to refuse the means to insure the enforcement of the laws upon which depend the revenues of the Government. The Department is almost daily compelled to refuse expenditures absolutely necessary to such enforcement. On this subject, the following is quoted from the Secretary's last annual report:

"Serious embarrassments have occurred several times through deficiency in this appropriation, which has proved insufficient to defray the necessary expenses of collection, the average annual cost of which exceeds \$7,000,000.

"The fund at disposal is derived from the permanent annual appropriation of \$5,500,000 made by the act of March 3, 1871, 'and in addition thereto such sums as may be received from fines, penalties, and forfeitures connected with the customs, and from fees paid into the Treasury by customs officers, and from storage, cartage, drayage, labor, and services,' which on the date of the passage of the act amounted to nearly \$2,000,000.

"Since that time the annual receipts from these sources have diminished about \$1,000,000, in consequence of legislation affecting fines, penalties, and forfeitures, and the abolition of many of the official fees."

The rapid growth of the country, the opening of an immense line of unguarded frontier by the building of railways and the creation of new ports, make the need of legislation on this subject more imperative than ever before.

Second. The compensation of all collectors of customs by fixed salaries, and the abolishment of all fees, commissions, perquisites, and emoluments.

This is necessary to secure uniformity and the proper adjustment of the compensation of these officers commensurate with their duties and responsibilities.

Under the present system the emoluments of some collectors are excessive while in other cases they are inadequate.

Third. The consolidation of customs districts, demanded alike for reasons of economy and the changed condition of commerce and transportation.

This might be accomplished by authorizing the Secretary of the Treasury to change the boundaries of customs districts, or to abolish districts when the expenditures exceed the receipts therein.

Fourth. The abolishment of oaths to monthly accounts of customs employés as unnecessary and as subjecting these officers to useless expense.

Fifth. The repeal of the laws requiring bonds to be given by individual importers upon the entry of merchandise for warehouse, and for the return of packages not designated for examination and delivered to importers in advance of appraisalment and liquidation of duties.

In the case of warehouse bonds the Government is amply protected by the possession of the merchandise, and the so-called "return bonds" are found in practice to serve no valuable end. The taking of these useless bonds involves a large expense without any compensating benefit.

Sixth. The revision and codification of the customs laws.

These laws are now scattered through the statutes, and should be brought together, revised, and reenacted in one harmonious code.

Seventh. Legislation to secure railway statistics of foreign commerce.

It is indispensable to a proper record and exposition of the foreign commerce of the United States that railway carriers of merchandise should be required by law to render such statistical returns as are required of carriers of freight by water.

Any attempt to completely exhibit the foreign trade of the country is largely neutralized and frustrated at present by the necessity of merely estimating the greater part of such trade conducted by rail.

These recommendations have been made, in whole or in part, by every Secretary of the Treasury of both political parties during the last ten years, and their importance can not be over estimated.

It is certainly unwise to neglect to furnish adequate means for the efficient collection and protection of the customs revenue, which is required to defray a considerable part of the expenses of the Government. The changes of twenty years, since the present provision for defraying the expenses of collecting the revenue from customs was made, necessitate new legislation on the subject.

In the development of the Northwest new customs districts and ports have been created, both on the ocean and frontier; many new interior ports have been established; but the fund at the disposal of the Department for paying the expenses of customs collection and administration, which in 1871 was about \$7,500,000, has been reduced by legislation affecting fines and fees until there is now but little over \$6,000,000 applicable to this purpose, while the actual expense is nearly a million more. This insufficient appropriation embarrasses efficient administration of the customs laws, to the manifest detriment of the revenue.

In this connection I call attention to the report of the Supervising Special Agent,* showing the inadequacy of the present force of customs officers for the protection of the revenue on the Mexican and Canadian frontiers, which force can not be augmented with the present insufficient appropriation.

I renew the recommendation made by my predecessor, in the last annual report, that section 8 of the Customs Administrative Act be repealed. Further experience has demonstrated the impracticability of administering this section. It is a constant source of irritation, and serves no useful purpose in ascertaining dutiable values.

Section 15 of the same act should be so amended as to authorize the taking of testimony now required to be taken by the General Appraisers by commissioners appointed for that purpose by the court, as well as by the General Appraisers, as now provided by law. This is necessary for the reason that the time of the General Appraisers is so fully occupied with their duties at the port of New York that they are unable to give proper attention to the demands of other ports in this regard.

I also renew the recommendation that that part of section 19 which imposes additional duties on unusual coverings be modified so that

See Appendix, page 849.

such coverings shall pay but a single duty at the rate to which they would be subject if imported separately, not less than that imposed upon their contents.

The General Appraisers call attention in their report to the effect of the clause in section 7 of the Customs Administrative Act which requires the assessment of an additional duty of 2 per cent. on the total appraised value of imported merchandise for every 1 per cent. of the advance above entered value, provided the appraised value exceeds by more than 10 per cent. the value declared on entry, and recommend that the law should be so modified as to limit the additional duty to not more than 100 per cent. I concur in their recommendation that the law be so modified.

By the present law (section 827, Revised Statutes) provision is made for the compensation of district attorneys when they appear on behalf of collectors in customs cases. Under the Administrative Act collectors are no longer parties to suits for the recovery of duties alleged to be unlawfully exacted, and although the services of the district attorneys in such cases are still required, it has been held that there is no authority for their payment. It is therefore recommended that the law be amended so that the district attorneys may receive adequate compensation in such cases.

The care of foreign merchandise at the World's Columbian Exposition will require a large temporary customs force, which can not be provided without an additional appropriation for that purpose. It is estimated that not less than \$200,000 will be required to enable the Department to employ the officers necessary to maintain the custody of dutiable exhibits and examine and appraise and collect duties upon such articles as may be withdrawn for consumption.

There will be undoubtedly a demand for the privilege of selling articles for delivery during the Exposition. This will require legislative authority, and I therefore suggest the enactment of a law to authorize such sales under regulations to be prescribed by the Secretary of the Treasury, as was done during the Centennial Exposition at Philadelphia, in accordance with the provisions of the act of July 20, 1876.

General Appraisers.

The report of the General Appraisers* shows a gratifying progress in the disposition of protests involving questions of classification. The number of these cases undisposed of November 1, 1890, was 996; the number received from November 1, 1890, to November 1, 1891, was 41,557 at the port of New York, and from other ports 8,589, making a

* Omitted from this compilation.

total of 51,142. Of this number, 33,897 involved the constitutionality of the acts of June 10 and October 1, 1890. Many of the remaining cases have been or will be disposed of by a single decision, as they involve identical questions, so that the opinion is expressed that by January 1 next nearly all cases received up to October 1, 1891, will have been settled either by actual decisions or suspensions made to await the final determination of analogous questions on appeals taken from the Board's decisions.

During the same time, the number of appeals to reappraisement has been 2,107, of which 2,051 have been disposed of, leaving but 56 pending.

This showing gives assurance that the Customs Administrative Act has realized the purpose of its enactment and afforded what was imperatively demanded—a speedy, just, and efficacious means for the settlement of differences between the Government and importers, both as to classifications and values.

It was to be expected that a law so radical in many of its features would be met by some embarrassments of administration and more or less criticism, but its practical operation for more than a year has in a great measure removed both the administrative difficulties and the opposition it first encountered. It has demonstrated its value and efficacy in checking fraudulent undervaluations and securing uniform assessment of duties, and while in some of its details amendment is desirable, yet in its main features it should not be disturbed.

INTERNAL REVENUE.

The receipts from the several objects of taxation under the internal-revenue laws for the fiscal years ended June 30, 1890 and 1891, are as follows:

Objects of taxation.	Fiscal year ended June 30—		Increase.	Decrease.
	1890.	1891.		
Distilled spirits.....	\$81,687,375 09	\$83,335,963 64	\$1,648,588 55	
Manufactured tobacco.....	33,958,991 06	32,796,270 97		\$1,162,720 09
Fermented liquors.....	26,008,534 74	28,563,129 92	2,554,595 18	
Oleomargarine.....	786,291 72	1,077,924 14	291,632 42	
Miscellaneous collections.....	153,503 96	290,127 30	136,623 34	
Total.....	142,594,696 57	146,035,415 97	3,440,719 40	

The receipts from all sources of internal revenue for the fiscal year ended June 30, 1891, were..... \$146,035,415 97

The receipts from the same sources for the fiscal year ended June 30, 1890, were..... 142,594,696 57

Making an increase in the receipts for the fiscal year just ended of..... 3,440,719 40

The total cost of collection for the fiscal year ended June 30, 1891, was..... 4,205,655 49

The total cost of collection for the fiscal year ended June 30, 1890, was..... 4,095,110 80

Increased cost of collection for fiscal year ended June 30, 1891..... 110,544 69

The amounts herein stated are the amounts actually collected during the fiscal years mentioned, but in many cases the money collected on the last day of June is not deposited until the first day of July, thus causing a discrepancy between the collections and the deposits.

The increase in the cost of collection for the fiscal year ended June 30, 1891, is due to various causes. The appropriation made by Congress for salaries and expenses of agents, gaugers, storekeepers, etc., amounted to \$2,100,000, but owing to a large increase in the products of distilleries operated during the fiscal year, which resulted in an increase of the taxes collected from spirits of more than \$3,000,000 as compared with the receipts of the preceding year, the actual expenses under the above head exceeded the amount appropriated by \$3,451.58, for which unpaid accounts are now on file and for the payment of which an additional appropriation will be necessary. In addition to this, there were gauged 193,557 gallons of grape brandy used in the fortification of sweet wines upon which no tax was paid. The actual work demanded under this provision, in addition to the above figures, was the gauging of 1,083,274 gallons of sweet wines, and a number of deputy collectors and other officers were required to be employed in the work of supervising the delivery of this brandy to the wine makers.

If expenditures of this character, which can hardly be fairly construed as entering into the cost of collection, could be separated from the total expenditure, the cost of collection for the fiscal year ended June 30, 1891, would be very materially reduced.

The percentage of cost of collection for the fiscal year ended June 30, 1891, was 2.88 per cent., as against 2.82 for the preceding fiscal year, the increase arising as above stated.

The total production of distilled spirits, exclusive of fruit brandies, for the fiscal year ended June 30, 1891, was 115,962,389 gallons; the total production for the fiscal year ended June 30, 1890, was 109,275,928 gallons, making an increase in the production of distilled spirits for the fiscal year just ended of 6,686,461 gallons.

There was also produced during the fiscal year ended June 30, 1891, 284,035 gallons of apple brandy, 777 gallons of peach brandy, and 1,519,900 gallons of grape brandy, making a total production of 1,894,712 gallons of brandy from fruits, as against 1,825,810 gallons of brandy from fruits produced during the fiscal year ended June 30, 1890. A further comparison of the two fiscal years shows a decrease of 325,006 gallons in the production of apple brandy and a decrease of

107,987 gallons in the production of peach brandy, with an increase of 411,895 gallons in the production of grape brandy for the fiscal year ended June 30, 1891. Of the brandy produced from grapes 193,557 gallons were used, free of tax, for the fortification of sweet wines, under the provisions of the act of October 1, 1890.

During the fiscal year ended June 30, 1891, 3,819 distilleries of all kinds were operated. For the preceding fiscal year 6,211 distilleries of all kinds were operated, a comparison showing a decrease of 2,392 in the number of distilleries operated for the fiscal year just ended. Nearly the whole of the above decrease arose from fruit distilleries which were not operated on account of the almost complete failure of the fruit crop.

During the fiscal year ended June 30, 1891, there were produced 30,497,209 barrels of beer. The number of barrels produced during the fiscal year ended June 30, 1890, was 27,561,944, making an increased production for the fiscal year just ended of 2,935,265 barrels.

For the fiscal year ended June 30, 1891, the total receipts from the taxes on tobacco, cigars, cigarettes, snuff, etc., were \$32,796,270.97.

The receipts from the same sources for the fiscal year ended June 30, 1890, were \$33,958,991.06. It was estimated that the provisions of the act of October 1, 1890, reducing the tax on tobacco and snuff to 6 cents per pound and repealing certain special taxes, would result in a decrease in the receipts from this source for the fiscal year ended June 30, 1891, of \$3,898,382.72. The actual decrease was \$1,162,720.09, the increased production of manufactured tobacco, snuff, cigars, cheroots, and cigarettes being the cause for such gratifying result.

The quantity of distilled spirits gauged for the fiscal year ended June 30, 1891, was 342,343,638 gallons. The quantity gauged for the fiscal year ended June 30, 1890, was 324,175,208 gallons, making an increase in the quantity of spirits gauged for the fiscal year just ended of 18,168,430 gallons.

It is estimated that the receipts from all sources of internal revenue for the current fiscal year (ending June 30, 1892) will aggregate \$150,000,000.

I respectfully call attention to the various recommendations contained in the report of the Commissioner of Internal Revenue,* and urge legislation in accordance with the views therein expressed.

* See Appendix, page 400.

FOREIGN COMMERCE.

The value of our foreign commerce—imports and exports of merchandise—during the last fiscal year was greater than for any previous year. It amounted to \$1,729,397,006, as against \$1,647,139,093 during the fiscal year 1890, an increase of \$82,257,913.

The value of imports of merchandise also during the last fiscal year was the largest in the history of our commerce, amounting to \$844,916,196, as against \$789,310,409 during the fiscal year 1890, an increase of \$55,605,787.

The value of the exports of merchandise during the same period was \$884,480,810, as against \$857,828,684 for the previous fiscal year, 1890, an increase of \$26,652,126.

The exports exceeded the imports of merchandise \$39,564,614.

The value of the imports and exports of merchandise and specie during the last four years ending June 30 has been as follows :

Merchandise.

	1888.	1889.	1890.	1891.
Exports—				
Domestic.....	\$683,862,104	\$730,282,609	\$845,293,828	\$872,270,283
Foreign.....	12,092,403	12,118,766	12,534,856	12,210,527
Total.....	695,954,507	742,401,375	857,828,684	884,480,810
Imports.....	723,967,114	745,131,652	789,310,409	844,916,196
Excess of exports.....			68,518,275	39,564,614
Excess of imports.....	28,002,607	2,730,277		

Specie.

	1888.	1889.	1890.	1891.
Exports—				
Gold.....	\$18,376,234	\$59,952,285	\$17,274,491	\$86,362,654
Silver.....	28,037,949	36,689,248	34,873,929	22,590,988
Total.....	46,414,183	96,641,533	52,148,420	108,953,642
Imports—				
Gold.....	43,934,317	10,284,858	12,943,342	18,232,567
Silver.....	15,403,669	18,678,215	21,032,984	18,026,880
Total.....	59,337,986	28,963,073	33,976,326	36,259,447
Excess of exports.....		67,678,460	18,172,094	72,694,195
Excess of imports.....	12,923,803			

The above table does not include gold and silver contained in ores and copper matte, as follows :

	Exports.	Imports.	Excess of Imports.
Gold in ores and copper matte.....	\$100,226	\$283,545	\$183,319
Silver in ores and copper matte.....	942,563	8,252,036	7,309,473

The following table shows the distribution of our commerce by leading countries and grand divisions of the globe, during the year ending June 30, 1891 :

Countries and grand divisions.	Exports.			Imports.	Total exports and imports.	Excess of exports + or of imports —.
	Domestic.	Foreign.	Total.			
COUNTRIES.						
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Great Britain and Ireland.....	441,599,807	3,814,219	445,414,026	194,723,262	640,137,288	+250,690,764
Germany.....	91,684,981	1,110,475	92,795,456	97,316,383	190,111,839	+ 4,320,977
France.....	59,826,739	866,451	60,693,190	76,688,995	137,382,185	+15,995,805
Belgium.....	26,694,180	846,274	27,540,454	10,945,672	38,486,096	+16,594,782
Italy.....	15,927,274	119,651	16,046,925	21,678,208	37,725,133	+ 5,631,268
Netherlands.....	23,816,814	297,163	24,113,977	12,422,174	36,536,151	+11,691,803
British North American Possessions.....	37,345,515	2,098,240	39,443,755	39,434,535	78,878,290	+ 9,220
Mexico.....	14,199,080	770,540	14,969,620	27,295,992	42,265,612	+12,326,572
West Indies.....	33,416,178	1,043,273	34,459,451	86,461,705	120,921,156	+32,002,254
Brazil.....	14,042,273	70,973	14,113,246	83,230,595	97,350,841	+69,110,349
China.....	8,700,308	700	8,701,008	19,321,850	28,022,858	+10,620,842
British East Indies.....	4,399,544	559	4,400,103	23,356,989	27,757,092	+18,956,886
Japan.....	4,800,650	7,043	4,807,693	19,309,198	24,116,891	+14,501,505
All other countries.....	95,809,970	1,164,960	96,974,930	132,730,638	229,706,574	+35,735,702
Total.....	872,270,283	12,210,527	884,480,810	844,916,196	1,729,397,006	+ 39,564,614
GRAND DIVISIONS.						
Europe.....	607,614,106	7,183,941	704,798,047	459,305,372	1,164,103,419	+245,492,675
North America.....	92,388,252	4,160,877	96,549,129	163,226,079	259,775,208	+66,676,960
South America.....	33,226,401	481,889	33,708,290	118,736,668	152,444,958	+85,028,378
Asia and Oceania.....	43,813,519	361,590	44,175,109	97,893,356	142,068,465	+53,718,247
Africa.....	4,738,847	19,050	4,757,897	4,207,146	8,965,043	+ 550,751
All other countries.....	489,158	3,180	492,338	1,547,575	2,039,913	+ 1,055,237
Total.....	872,270,283	12,210,527	884,480,810	844,916,196	1,729,397,006	+ 39,564,614

It will be observed that the value of our total trade in merchandise with Great Britain and Ireland amounted to \$640,137,288, of which the value of exports was \$445,414,026, and the value of imports \$194,723,262, showing an excess in exports of \$250,690,764.

Our import and export trade with Great Britain and Ireland forms 37 per cent. of such trade with all nations, and about 55 per cent. of such trade with all Europe. Our trade with North America including the West Indies stands next in value, followed by that with South America, and that with Asia and Oceania. Our trade with Germany showed an excess of imports of \$4,520,927; with France, of \$15,995,805.

In our total trade with Europe the excess of exports over imports was \$245,492,675.

Our commerce in merchandise with North America, including Mexico, Central America, and West Indies, amounted to \$259,775,208, of which the value of the imports was \$163,226,079, and of the exports \$96,549,129, an excess of imports of \$66,676,950; but if our export trade by land carriage with Mexico and Canada had been correctly ascertained by means of an adequate law for that purpose, it is esti-

ated that our imports and exports with North America would appear upwards of \$290,000,000, and leave an excess of imports of less than \$36,000,000, instead of \$66,000,000, as now appears.

Our total trade with South America in merchandise amounted to \$152,444,958, of which the value of the imports was \$118,736,668, and of the exports \$33,708,290, an excess of imports of \$85,028,378.

Values of the imports and exports of merchandise of the United States carried in cars and other land vehicles during each fiscal year from 1871 to 1891, inclusive.

Year ending June 30—	Imports and exports in cars and other land vehicles.	Year ending June 30—	Imports and exports in cars and other land vehicles.
1871.....	\$22,985,510	1882.....	\$34,973,317
1872.....	27,650,770	1883.....	48,062,892
1873.....	27,869,978	1884.....	46,714,068
1874.....	23,022,540	1885.....	46,822,775
1875.....	20,388,235	1886.....	43,700,350
1876.....	18,479,154	1887.....	48,951,725
1877.....	17,464,810	1888.....	54,356,827
1878.....	20,477,364	1889.....	66,664,878
1879.....	19,423,685	1890.....	73,871,263
1880.....	20,981,893	1891.....	72,856,194
1881.....	25,452,521		

Exports.

The total value of exports of domestic merchandise was \$872,270,283, an increase of \$26,976,455 over the exports of the preceding fiscal year, 1890, and was greater than that of any year except 1881.

The material increase or decrease in value of the principal articles of domestic exports was as follows :

Increase in—

Cotton, unmanufactured.....	\$39,744,106
Sugar, refined.....	4,237,360
Cotton manufactures.....	3,605,580
Iron and steel, and manufactures of.....	3,367,406
Provisions, comprising meat and dairy products.....	2,752,965
Copper, and manufactures of, not including ore.....	2,265,205
Coal.....	1,534,938
Mineral oil, refined.....	1,491,428
Paraffine and paraffine wax.....	1,305,940
Hops.....	1,216,903
Copper ore.....	1,207,657

Decrease in—

Breadstuffs.....	\$26,804,271
Wood, and manufactures of.....	2,004,489
Ore, gold and silver bearing.....	1,939,434
Fruits, including nuts.....	1,624,754
Furs and fur skins.....	1,425,229
Vegetable oils.....	1,369,505
Fish.....	1,044,205

There was an increase in the value of domestic exports to—

France.....	\$10,813,735
Germany.....	7,369,766
China.....	5,756,518
Brazil.....	2,146,777
Spain.....	1,871,620
British Australasia.....	1,723,598
Mexico.....	1,532,972
Central American States.....	1,475,641
Netherlands.....	1,329,226

And a decrease to—

Argentine Republic.....	\$5,604,552
Great Britain and Ireland..	2,859,202
Russia in Europe.....	2,769,553
British North American Possessions.....	1,198,939

The values of the principal articles of domestic exports during the three years ending June 30, 1891, were as follows :

	1889.	1890.	1891.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Cotton, and manufactures of.....	247,987,914	260,968,069	304,317,755
Provisions, comprising meat and dairy products.....	104,122,444	136,264,566	139,017,471
Breadstuffs.....	123,876,661	134,025,927	128,121,656
Mineral oils.....	49,913,677	51,483,089	52,026,734
Animals.....	18,374,805	33,638,128	32,935,086
Iron and steel, and manufactures of, including ore.....	21,156,109	25,542,298	28,909,614
Wood, and manufactures of.....	26,910,672	28,274,529	26,270,040
Tobacco, and manufactures of.....	22,699,668	23,385,691	25,220,472
Leather, and manufactures of.....	10,747,710	12,438,847	13,278,847
Coal.....	6,690,479	6,856,088	8,391,026
Oil cake and oil-cake meal.....	6,927,912	7,999,926	7,452,094
Copper ore.....	7,518,258	6,053,286	7,260,893
Sugar and molasses.....	2,117,533	3,029,413	7,059,788
Chemicals, drugs, dyes, and medicines.....	5,542,753	6,224,504	6,545,354
Fish.....	5,969,235	6,040,826	4,996,621
Spirits of turpentine.....	3,777,525	4,560,931	4,668,140
Copper, and manufactures of, not including ore.....	2,348,954	2,349,392	4,614,597
Vegetable oils.....	1,585,783	5,672,441	4,302,936
Total.....	668,178,092	777,627,661	805,429,124
Value of all domestic exports.....	730,282,609	845,293,828	872,270,283
Per cent. of enumerated articles to total.....	91.50	91.99	92.34

The value of the domestic exports during the two years ending June 30, 1891, classified by groups according to character of production, was as follows :

	1890.		1891.	
	Values.	Per cent.	Values.	Per cent.
Products of agriculture.....	\$629,785,917	74.51	\$642,751,344	73.69
Products of manufacture.....	151,131,297	17.89	168,927,315	19.37
Products of mining (including mineral oils).....	22,351,746	2.64	22,054,970	2.53
Products of the forest.....	29,473,064	3.48	28,715,713	3.29
Products of the fisheries.....	7,496,044	.89	6,208,577	.71
Other products.....	5,055,740	.60	3,612,364	.41
Total.....	845,293,828	100.00	872,270,283	100.00

Imports.

During the last fiscal year, the value of imports of merchandise was \$844,916,196, an increase of \$55,605,787 over the imports of the fiscal year 1890.

The value of free merchandise imported was \$366,241,352, and of dutiable was \$478,674,844, an increase in the value of free merchandise of \$100,572,723, and a decrease in the value of dutiable goods of \$44,966,936, caused mainly by the transfer of sugar and certain textiles from the dutiable to the free list by the new tariff.

The material increase or decrease in value of the principal classes of free and dutiable imports during the year ending June 30, 1891, as compared with 1890, was as follows:

Increase in—

Free of duty:

Sugar and molasses, except from Hawaiian Islands (made free by new tariff).....	\$45, 333, 773
Coffee.....	17, 856, 345
Textile grasses and fibrous vegetable substances.....	14, 008, 019
Hides and skins other than furs.....	6, 048, 873
Chemicals, drugs, and dyes.....	4, 825, 324
Fruits, including nuts.....	3, 555, 144
India rubber and gutta percha, crude.....	3, 166, 292

Dutiable:

Iron and steel and manufactures of.....	11, 575, 966
Metals, metal compositions and manufactures of.....	2, 988, 588
Wool, unmanufactured.....	2, 967, 289
Vegetables.....	2, 621, 000

Decrease in—

Free of duty:

Silk, unmanufactured.....	\$5, 249, 450
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Dutiable:

Sugar and molasses (caused by transfer to free list).....	36, 942, 172
Wool and manufactures of.....	15, 522, 352
Flax, hemp, jute, and other vegetable substances.....	13, 863, 081
Flax, hemp, jute, etc., manufactures of.....	4, 397, 185
Hats, bonnets, and hoods, materials for (caused by transfer in part to free list)	2, 725, 722

There was an increase in the value of our imports in 1891 over 1890 from—

Brazil.....	\$23, 911, 839
The West Indies.....	8, 457, 464
Great Britain and Ireland.....	8, 234, 346
Mexico.....	4, 605, 077
China.....	3, 061, 379
British East Indies.....	2, 552, 670
British Australasia.....	1, 961, 345
Central American States.....	1, 746, 678
Hawaiian Islands.....	1, 581, 689

And a decrease from—

Philippine Islands.....	\$6, 425, 417
Netherlands.....	4, 907, 059
Japan.....	1, 794, 126
Germany.....	1, 521, 300

Imports entered for consumption.

The value of imported merchandise entered for consumption and the duty collected thereon, during the last five fiscal years, has been as follows:

Year ending June 30—	Value of merchandise.		Ordinary duty collected.	Average rate collected on—	
	Free of duty.	Dutiable.		Dutiable.	Free and dutiable.
				Per cent.	Per cent.
1885.....	\$192, 912, 224	\$386, 667, 820	\$177, 319, 550	45.86	30.59
1886.....	211, 530, 769	413, 778, 065	188, 379, 397	45.55	30.13
1887.....	223, 093, 659	450, 325, 322	212, 032, 424	47.10	31.02
1888.....	244, 104, 852	468, 143, 774	213, 509, 802	45.63	29.99
1889.....	266, 674, 690	481, 866, 768	218, 701, 774	45.13	29.50
1890.....	266, 103, 047	507, 671, 764	225, 317, 078	44.41	29.12
1891.....	388, 064, 404	466, 455, 173	215, 790, 686	46.26	25.25

Trade with Central and South America.

Our total imports of merchandise from Mexico, Central and South American States, British Honduras, and the West Indies, during the fiscal year 1891, amounted to \$242,512,577, or 28.70 per cent. of our total imports of merchandise.

The value of our exports of merchandise to these same countries during the same period was \$90,413,516, or 10.22 per cent. of the value of our total exports of merchandise.

Our total imports and exports of merchandise from and to these countries, during the same period, amounted to \$332,926,093, or 19.26 per cent. of our total imports and exports of merchandise.

It will be seen that the excess of our imports of merchandise from these countries over our exports to them amounted to \$152,099,061. In other words, our imports of merchandise were 72.84 per cent. and exports 27.16 of the total trade with these countries, and we imported merchandise to the value of \$2.68 for every dollar in value exported to these countries.

The excess of imports over exports of merchandise for the fiscal year 1890 was \$108,054,472. For the fiscal year 1889 this excess was \$117,917,883.

A comparison of our commerce with this entire group of countries for the years 1870, 1880, and 1891 shows a gradual increase of both imports and exports of merchandise.

During the year 1870 the value of imports was \$117,398,951 and of exports \$55,140,322, an excess of \$62,258,629.

During the year 1880 the value of imports was \$178,985,906 and of exports \$61,546,474, an excess of \$117,439,432.

The per cent. of our commerce with these countries, as compared with our total commerce, in 1870, was 20.82; in 1880, 15.99; and in 1891, 19.26.

Table showing the value of imports and exports of merchandise in the trade of the United States with Mexico, Central America, the West Indies, and South America, and the excess of imports or of exports, during the years ending June 30, 1889, 1890, and 1891.

Countries from which imported and to which exported.	1889.				1890.				1891.			
	Imports.	Exports, domestic and foreign.	Excess of imports.	Excess of exports.	Imports.	Exports, domestic and foreign.	Excess of imports.	Excess of exports.	Imports.	Exports, domestic and foreign.	Excess of imports.	Excess of exports.
Mexico.....	\$21,253,601	\$11,486,800*			\$22,600,915	\$13,285,287*			\$27,295,992	\$14,969,630*		
Central America—												
British Honduras.....	211,465	369,698		\$158,133	186,831	354,468		\$167,637	219,090	462,839		\$243,749
Guatemala.....	2,846,685	994,701	1,851,984		2,281,681	1,345,719	935,962		2,618,199	1,997,944	620,255	
Nicaragua.....	1,747,246	1,009,687	737,559		1,655,690	1,373,019	282,671		1,705,961	1,692,942	13,019	
Costa Rica.....	1,442,365	983,164	459,201		1,676,711	1,126,170	550,541		2,532,365	1,331,049	1,201,316	
Salvador.....	1,662,162	701,196	960,966		1,453,968	890,546	554,412		1,783,066	1,150,460	632,606	
Honduras.....	1,215,561	637,175	578,386		984,404	532,024	452,380		1,159,591	640,921	518,670	
Total.....	8,414,019	4,326,923	4,088,096		8,032,444	5,296,478	2,735,966		9,799,122	6,813,316	2,985,806	
West Indies—												
Cuba and Puerto Rico.....	55,837,996	13,916,242	41,921,754		57,855,217	15,381,953	42,473,264		64,878,505	14,380,122	50,498,383	
British West Indies.....	15,985,562	8,388,106	7,597,456		14,865,018	8,288,786	6,576,232		16,233,184	9,779,188	6,514,046	
All other.....	6,123,775	8,335,805	2,412,030		5,284,006	9,526,483	4,242,477		5,290,016	10,390,191	5,010,175	
Total.....	77,947,333	30,840,153	47,107,180		78,004,241	33,197,222	44,807,019		86,461,705	34,459,451	52,002,254	
South America—												
Colombia.....	4,293,519	3,821,017	442,502		3,875,263	2,585,828	989,435		4,765,354	3,182,644	1,582,710	
Venezuela.....	10,392,569	3,738,961	6,653,608		10,966,765	4,028,583	6,938,182		12,078,541	4,784,956	7,293,585	
Guianas:—												
British.....	4,526,181	1,664,269	2,861,912		4,320,975	2,106,345	2,214,630		4,883,296	1,898,742	2,984,554	
Dutch.....	460,243	262,575	197,668		574,114	279,619	294,495		724,190	353,983	370,207	
French.....	13,366	147,732	134,366		17,647	160,953	143,306		46,520	185,954	139,434	
Total.....	4,969,790	2,106,576	2,863,214		4,918,736	2,546,797	2,371,939		5,653,916	2,268,679	3,385,237	
Brazil.....	60,403,804	9,351,081	51,052,723		59,318,766	11,972,214	47,346,552		83,230,585	14,120,246	69,110,349	
Uruguay.....	2,986,964	2,192,848	794,116		1,794,993	3,351,874	1,556,881		2,356,739	1,070,973	1,285,766	
Argentine Republic.....	3,454,018	9,268,806	5,814,788		6,401,667	8,887,477	2,485,810		8,978,544	3,168,899	5,809,645	
Chile.....	2,622,625	2,972,794	350,169		3,185,249	3,226,364	41,115		3,425,260	5,148,638	1,723,378	

Bolivia.....	2,126	4,688	4,712	50	11,003	10,972	2,784	4,890	.....	2,646
Peru.....	814,082	780,828	464,813	281,680	1,427,801	1,078,872	282,111	1,282,891	.....	1,012,478
Ecuador.....	680,005	750,311	61,206	538,080	715,218	180,148	638,487	902,199	.....	64,723
Total South America.....	92,126,043	25,021,017	57,114,035	90,004,144	26,703,646	81,233,496	118,728,008	83,708,200	.....	85,028,878
Total of group.....	190,981,470	82,043,897	117,917,888	194,940,878	90,884,108	108,064,473	348,812,877	90,418,516	.....	102,099,061
Total of imports and ex- ports from and to all countries.....	745,151,653	712,401,378	2,730,377	789,510,409	357,828,664	68,818,275	944,916,186	284,480,810	.....	39,564,814
Per cent. of above group.....	26.84	11.06	.....	25.30	10.89	.....	28.70	10.23	.....	.....

* Exports defective owing to absence of law providing for collection of statistics of exports by land carriage.

In the following table the imports from the groups of countries south of the United States are given, and the value and per cent. of imports free of duty and dutiable, during the year ending June 30, 1891:

Countries.	Imports.			Per cent. of free.
	Free of duty.	Dutiable.	Total.	
Mexico.....	\$23,364,519	\$3,931,473	\$27,295,992	55.53
Central American States and British Honduras.....	9,955,972	62,240	10,018,212	99.33
West Indies.....	42,072,534	44,389,171	86,461,705	48.66
South America.....	110,473,391	8,263,277	118,736,668	93.04
Total of group.....	185,866,416	56,646,161	242,512,577	76.64

The principal articles imported from the entire group were: Sugar, coffee, tobacco, crude India rubber, hides and skins other than furskins, silver-bearing ore, and fruits, of which only tobacco and silver-bearing ore and a portion of the fruits are dutiable.

It is probable that under the new tariff the value of dutiable imports during the year ending June 30, 1892, from the group of countries to the south of us will not exceed 10 per cent. of the total value of imports.

The principal articles of domestic exports from the United States to this entire southern group consisted of manufactures of iron and steel, manufactures of cotton, manufactures of wood, wheat flour, mineral oil, and agricultural implements.

Imports and exports under reciprocity treaties.

The reciprocity clause of the new tariff is opening new markets and increasing the demand for our products.

During the year ending June 30, 1890, our exports of domestic products to Brazil amounted to \$11,902,496, and in 1891 to \$14,049,273, an increase of \$2,146,777.

The treaty with Brazil went into effect April 1 last, and it is not to be expected that the results will be very marked as yet. During the six months ending September 30, 1890, our domestic exports of merchandise to Brazil amounted to \$6,208,804, and during the same period of 1891, under the operation of the reciprocity treaty, to \$7,515,858, an increase of \$1,307,054.

This increase in exports to Brazil since the reciprocity treaty went into effect has been mainly in locomotives, steam-engines, machinery and cars for tramways and railways, wheat flour, bacon, boards, deals, planks, etc.

There has been a decrease in the exports of wheat, lard, and cotton manufactures.

The reciprocity treaties with Santo Domingo and with Spain concerning trade relations with Cuba and Puerto Rico did not go into effect until September 1, and as yet there are no available statistics to show the effects of the treaties upon our commerce. Furthermore, the reduction of duties on wheat and wheat flower imported into these islands from the United States will not take effect until January 1, 1892.

NAVIGATION.

The Bureau of Navigation reports the entire documented tonnage of the United States to be as follows:

Documented vessels.

	1891.	
	No.	Tons.
Registered.....	1,587	1,005,950.13
Enrolled and licensed.....	22,312	3,673,308.83
Total.....	23,899	4,684,758.94

The registered tonnage of the United States has increased 59,254 tons in the last year, and the enrolled and licensed tonnage in the same period has increased 201,007 tons.

During the same time the sailing tonnage has increased 62,324 tons, and the steam tonnage 157,175 tons.

The vessels built and documented during the last fiscal year were as follows:

Class.	1891.	
	No.	Tons.
Sailing vessels.....	733	144,290.44
Steam vessels.....	493	185,036.82
Canal boats.....	57	7,059.48
Barges.....	106	32,915.55
Total.....	1,384	369,302.29

The following table shows the tonnage built, apportioned in respect to the several grand divisions of the country :

Grand divisions.	1888.		1889.		1890.		1891.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Atlantic and Gulf coasts..	604	83,168.43	657	93,912.24	663	156,785.99	944	218,392.46
Pacific coast.....	104	21,956.43	112	17,939.43	93	12,834.92	122	19,669.84
Northern lakes.....	222	101,102.87	225	107,080.30	191	108,525.87	204	111,856.45
Western rivers.....	84	11,859.15	83	12,302.36	104	16,505.98	114	19,983.54
Total.....	1,014	218,086.88	1,077	231,134.33	1,051	294,122.76	1,384	369,302.29

The iron vessels built during the fiscal year measured 105,618 tons. Of these there was built at the lake ports a tonnage of 57,989 tons and on the Atlantic coast 46,265 tons. The documented iron tonnage on the lakes is 181,724 tons and on the seacoast 554,963 tons. The entire documented iron tonnage, including that of the western rivers, is 741,598.24 tons. The documented tonnage on the Northern lakes June 30, 1891, was 1,154,870 tons; on the Western rivers, 308,348 tons; on the Pacific coast, 440,858 tons; and on the Atlantic and Gulf coasts, 2,780,683 tons.

The foreign-going tonnage, exclusive of that engaged in the whale fisheries, is 988,719 tons, of which 236,070 tons are steam vessels, and 752,649 tons are sailing vessels.

Of our total documented tonnage, 2,016,264 tons are steam, and 2,668,495 tons are other than steam.

The registered vessels include the documented tonnage above mentioned in the foreign sea-going trade, and 17,231 tons in the whale fishery. The enrolled and licensed vessels include 3,609,876 tons documented under the federal laws, and engaged in the "coasting trade" along the seacoasts, the rivers, and the great lakes of the United States, and 68,933 tons licensed for the fisheries.

The appropriation by the last Congress of a sum to compensate American-built steamships for carrying the mails will greatly encourage the building of ships in the United States of the class to which the benefits of the act are limited, namely, those capable of a speed in many cases of more than 20 statute miles an hour, for thousands of miles, without coaling, and will tend to the recovery of our share of the ocean carrying trade of the world, in competition with the steamships of Great Britain, France, and Germany.

Those nations, together with Spain and Italy, have subsidized their lines of steam vessels in one form or another, and they carry most of

our exports, which are usually products of a bulky nature, and constitute a very large and profitable portion of the commerce of the world.

Our annual customs receipts scarcely exceed the money paid annually to the owners of foreign vessels for the ocean transportation of our own people and merchandise, most of which large sum of about \$200,000,000 would be paid to our own vessel-owners under the fostering influence of friendly legislation.

Through treaties and regulations made since 1827, mostly prior to the late war, the early discriminations of the Government in favor of American shipping in the foreign trade have been removed and the vessels of other nations are now admitted in the United States, in some cases, on more favorable terms than our own, and in nearly all instances on conditions as favorable. The foreign competition thus stimulated, together with the injurious effects of the war upon our ocean carrying trade, have almost destroyed our foreign shipping interests. This, fortunately, is not the case in respect to our coasting trade, which is now the largest of any civilized country, and gives us a fleet of vast benefit to the nation in time of peace and capable of incalculable service in time of war.

There should be no interference with the legal barriers that now preserve the coasting trade to citizens of the United States, whether upon the lakes, the rivers, or the ocean. The late census shows that in addition to the large tonnage of documented vessels mentioned in the statistics above stated of vessels in this trade, there is a very considerable number of inferior undocumented craft employed upon the rivers and elsewhere, consisting of unriggered barges, flat boats, etc. Upon the Ohio River and its tributaries above Cincinnati alone this additional tonnage is found to amount to 2,470,547 tons. The value of the coasting and river fleet to domestic commerce, and its relative importance, is shown by the reports of the Census Office, which state that on the great lakes alone (without considering wharves, elevators, shipyards, or other plants connected with shipping) the aggregate valuation of the vessels in 1890 was \$58,128,500, and that their total ton mileage for the season of 1889 was 15,518,360,000, equivalent to 22.6 per cent. of the total ton mileage of railways in the United States.

Losses of shipping in the foreign trade.

The following table cogently sets forth the loss of our shipping in the foreign trade:

Values of the imports and exports of merchandise of the United States carried, respectively, in American vessels, and in foreign vessels, during each fiscal year from 1857 to 1891, inclusive, with the percentage carried in American vessels.

Year ending June 30--	Imports and exports--			Percentage carried in American vessels.
	In American vessels.	In foreign vessels.	Total.	
1857	\$510,331,027	\$213,519,796	\$723,850,823	70.5
1858	447,191,304	160,066,267	607,257,571	73.7
1859	465,741,381	229,816,211	695,557,592	66.9
1860	507,247,757	255,040,793	762,288,550	66.5
1861	381,516,788	203,478,278	584,995,066	65.2
1862	217,095,418	218,015,296	435,110,714	50.0
1863	241,872,471	343,056,031	584,928,502	41.4
1864	184,061,486	455,793,548	639,855,034	27.5
1865	167,402,872	437,010,124	604,412,996	27.7
1866	325,711,861	685,226,691	1,010,938,552	32.2
1867	297,834,904	581,330,403	879,165,307	33.9
1868	297,981,573	550,546,074	848,527,647	35.1
1869	289,956,772	586,492,012	876,448,784	33.1
1870	352,969,401	638,927,488	991,896,889	35.6
1871	353,664,172	755,822,576	1,109,486,748	31.8
1872	345,331,101	839,346,962	1,184,678,063	29.1
1873	346,306,592	966,723,651	1,313,030,243	26.3
1874	350,451,994	939,206,106	1,312,658,100	27.1
1875	314,257,792	884,788,517	1,219,046,309	25.9
1876	311,076,171	813,354,987	1,124,431,158	27.6
1877	316,660,281	859,920,536	1,194,045,627	26.9
1878	313,030,906	876,991,129	1,210,022,035	26.3
1879	272,015,692	911,269,232	1,202,708,609	22.9
1880	258,346,577	1,224,265,434	1,503,593,404	17.42
1881	250,586,470	1,269,002,983	1,545,041,974	16.48
1882	227,229,745	1,212,978,769	1,475,181,831	15.17
1883	240,420,500	1,258,506,924	1,547,030,316	16.03
1884	233,699,035	1,127,798,199	1,408,211,302	17.16
1885	194,865,743	1,079,518,566	1,319,717,084	15.29
1886	197,349,503	1,073,911,113	1,314,960,966	15.02
1887	194,356,746	1,165,194,508	1,408,502,979	14.29
1888	190,857,473	1,174,697,321	1,419,911,621	13.90
1889	203,805,108	1,217,063,541	1,487,533,027	14.34
1890	202,451,886	1,371,116,744	1,647,139,093	12.85
1891	206,459,725	1,450,101,087	1,729,397,006	12.86

No words can add to the force of these figures. In 1858 over 73 per cent. of our maritime exports and imports was carried in American bottoms, and in 1891 less than 13 per cent. In 1861 our foreign going tonnage, exclusive of that on the lakes, was 2,642,628, the highest point reached in the history of the nation, and in 1865, four years later, it had fallen to 1,602,583. The causes of the decline need not be discussed here. Since the war they have been such as might have been obviated by action similar to that recently taken by Congress, and by encouragement on the part of that body, such as has been given to its navigation interests in no stinted measure by the Government of Great Britain.

The demand for ships of war will give us shipyards competent for building commercial vessels to any extent, and there is no good reason why ships should not be built here, and transport under American ownership a fair share of our exports and imports. Great industries like ship-building and the navigation of ships should not be surrendered by us to other nations without a determined struggle to retain them. No backward step should be taken in the efforts now being made to restore the American flag to the high seas.

The United States courts are considering various questions relating to the rights and duties of American owners of foreign-built yachts navigated in our waters. Some additional legislation in regard to vessels of this class may become necessary.

Changes in trade and commerce, and the rapid growth of seaboard towns, especially on the Pacific coast, make it often desirable to enter and clear vessels and discharge cargo at places other than ports established by law. To meet exigencies of this character, the Secretary of the Treasury should have authority to designate places as ports where customs officers may be stationed, when, in his judgment, the exigencies of commerce so require, with authority to enter and clear vessels, discharge cargo, collect duties and other moneys, and perform such other services in connection with the customs and navigation laws as the Secretary may prescribe.

ESTABLISHMENT OF A MARINE BOARD.

For many years it has been the desire of the various shipping organizations and marine associations of the country that a marine board should be established with a view to securing greater uniformity in the administration of the navigation, quarantine, and marine laws.

Pursuant to a resolution of Congress and the recommendation of the delegates to the United States International Marine Conference, a bill to effect this purpose was submitted to the last Congress, which passed the Senate, but failed of final action in the House, though favorably reported by the Committee on Commerce. The subject is again commended to the favorable consideration of Congress.

IMMIGRATION.

Pursuant to the evident intent of Congress as expressed in the immigration act of March 3, 1891, all contracts with State boards have been abrogated, and the immigration business at all ports of the United States is now controlled and managed directly by the Treasury Department

through a commissioner of immigration stationed at each principal port of entry, assisted by a suitable number of inspection officers. The change proves to be a beneficial one, giving to the service uniformity, method, and greater efficiency. Along the international boundaries the enforcement of the immigration laws is intrusted to immigration inspectors, who are under the general direction of the collectors of customs in the several districts where they are stationed. In the interest both of economy and efficiency, these immigrant inspectors also perform duty, when necessary, in the enforcement of the customs laws and the Chinese exclusion act.

Table showing number and nativity of alien immigrants arriving at ports of the United States during the fiscal year ending June 30, 1891.

Ports.	Ireland.	England.	Wales.	Scotland.	Germany.	France.	Russia.	Poland.	Switzerland.	Sweden.	Norway.	Belgium.	Holland.	Italy.
New York.....	35,424	24,229	252	4,908	74,382	4,388	33,504	24,256	6,102	29,415	10,932	2,458	4,141	70,776
San Francisco.....	95	810	3	122	260	95	28	.....	10	13	18	6	13	40
Philadelphia.....	5,137	3,702	50	790	5,896	70	1,763	2,348	138	2,225	925	246	15	44
New Orleans.....	6	222	.....	30	145	508	7	.....	28	3	3	28	12	2,909
Baltimore.....	169	378	.....	.....	27,197	3	5,668	.....	29	273	14	.....	7	7
Boston.....	11,644	6,988	79	1,796	330	21	2,537	303	8	4,418	1,046	3	15	28
Portland, Me.....	71	137	.....	.....	13	9	1	.....	.....	19	1	2	.....	.....
Portland, Oreg.....	.....	11	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilmington.....	1	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....
New Bedford.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Gloucester.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Key West.....	.....	737	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	2
Galveston.....	2	49	.....	.....	2	.....	.....	.....	.....	1	1	.....	.....	.....
Charleston.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brunswick.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport News.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	52,549	37,284	384	7,647	107,727	5,102	43,508	26,907	6,315	36,367	12,940	2,743	4,193	73,806

Ports.	Spain.	Portugal.	Denmark.	Hungary.	Austria.	Bohemia.	Finland.	China.	Armenia.	Australia.	Turkey.	Greece.	All other countries.	Total.
New York.....	117	1,182	9,042	26,433	26,539	8,498	4,119	4	380	7	142	981	3,052	405,664
San Francisco.....	26	143	14	4	30	.....	.....	2,068	.....	325	.....	.....	1,021	5,134
Philadelphia.....	5	.....	451	684	547	.....	10	.....	.....	1	65	103	1,083	25,798
New Orleans.....	124	.....	11	.....	15	.....	.....	.....	.....	1	2	4	149	4,197
Baltimore.....	.....	.....	474	.....	6,468	.....	.....	.....	.....	.....	.....	.....	23	40,712
Boston.....	10	8	201	34	75	.....	.....	1	.....	5	1	4	1,184	30,739
Portland, Me.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	256
Portland, Oreg.....	.....	.....	.....	.....	.....	.....	.....	57	.....	.....	.....	.....	85	154
Wilmington.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	11
New Bedford.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	799	800
Gloucester.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	8
Key West.....	1,906	1	.....	.....	.....	.....	.....	8	.....	.....	.....	.....	6	2,686
Galveston.....	2	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	65
Charleston.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2
Brunswick.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17	18
Newport News.....	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	9
Total.....	2,191	1,341	10,201	27,155	33,674	8,498	4,129	2,128	380	339	212	1,092	7,441	516,233

NOTE.—Any disparity between the totals in this table and those furnished by the Bureau of Statistics is accounted for by the fact that the former include immigrants only, while the latter include tourists, etc.

The foregoing table shows an increase in arrivals of 94,376, or more than 22 per cent. over the previous year. The arrivals during the first four months of the present fiscal year (ending October 31, 1891) have been 189,778, an excess of 40,595, or of more than 27 per cent. over the corresponding months of 1890. This extraordinary and progressive increase in the tide of alien immigration to the United States, which does not include the increased arrivals *via* Canada, has not failed to attract the attention of the whole country, and it will doubtless command the early consideration of Congress. If ever there was a question which ought to be treated independently of partisan politics this would seem to be such a question; and the practical unanimity in this matter of our citizens of all parties and of whatever nationality furnishes the opportunity for the adoption of measures dictated solely by patriotic considerations.

An analysis of the statement of arrivals during the last fiscal year shows that an increasing proportion of immigrants is coming to us from those classes and those countries of Europe whose people are least adapted to, and least prepared for, citizenship in a free republic, and are least inclined to assimilate with the general body of American citizens.

With the approaching exhaustion of the supply of free arable land in the United States only a trifling percentage of immigrants now engage in farming on their arrival in this country, whatever may have been their former occupation. The vast majority of them crowd into our cities and large towns, with the inevitable result of overstocking the labor market and depressing wages, while the least efficient and more vicious among them soon drift into our poorhouses and prisons, to be a continuing burden upon our people. The laws already enacted by Congress for the purpose of checking this tendency and preventing the mischief which would result from unrestricted immigration have accomplished something. The attempt to enforce these laws efficiently has also developed a body of information, based on actual experience, which should be invaluable in framing future legislation. While the application of existing laws has very greatly diminished some of the specific abuses at which they were aimed, it obviously has not prevented a large increase in the total volume of immigration, and a distinct deterioration in its average quality.

The chief causes of the current increase of immigration lie on the surface. The higher wages, the better scale of living, the general and fairly uniform prosperity prevailing in this country, coupled with commercial and industrial depression abroad, the present trifling cost of

steerage passage, and the wide publicity now given to all the first-named facts among the masses of Europe, are a sufficient explanation, though other reasons contribute to the result.

Among the more obvious and fatal weaknesses in the present attempt to winnow somewhat our incoming tide of immigration, and to exclude certain classes of aliens who are admitted by all to be either dangerous or undesirable, are these: (1) In the worst and most important classes of cases, to wit, criminals, ex-convicts, polygamists, and illegally "assisted" immigrants, the law supplies almost no means of ascertaining the facts. The personal statements of such immigrants obviously have little value as evidence, and it is only by accident that any other source of information is open to the inspection officers at the port of arrival. (2) With the increasing efficiency of inspection at our several seaports, and the fact of this vigilance made known to intending emigrants in Europe, an increasing number of aliens are now landing at Canadian ports and thence entering the United States by rail, thus practically avoiding all effective scrutiny, besides depriving the immigrant fund of the head tax which would otherwise be paid.

Congress alone can remedy these glaring defects in a system which has thus far necessarily been tentative and experimental. Plainly the process of sifting immigrants should at least begin abroad, to be completed, and not commenced, at the United States port of arrival. Some system of investigation or certification, consular or otherwise, in the country where the intending emigrant resides, is believed to be entirely practicable, and such a system, supplemented by continued vigilance at our ports of entry, ought to prove effective to the desired end. Considerations of humanity as well as of efficiency require that aliens of the prohibited classes shall not be permitted to come across the ocean to our ports, only to be sent back penniless and stranded.

As to the entrance of alien immigrants into the United States by rail across the Canadian border, the remedy would suggest itself of either securing an international arrangement for a uniform system of foreign or seaport inspection, or, failing that, of making our own inspection at the border as effective as possible, as a part of our own general system.

The extent to which criminals, paupers, and defectives are systematically deported from certain foreign countries to the United States, and the best means of preventing this abuse, will be considered in a future communication to Congress.

The new and commodious Immigrant Station on Ellis Island, in New York harbor, is practically completed, and the business of receiving

and inspecting immigrants will be transferred thither from the Barge Office as soon as certain details are arranged. A regular ferry will be maintained between Ellis Island and the Barge Office, and the annex forming part of the latter will be utilized as a final landing-place for those immigrants who are destined for New York City and adjacent points. The new receiving station, besides adding vastly to the comfort, convenience, and sanitary well-being of the arriving immigrants, will enable the inspection officers to perform their duties much more thoroughly, effectively, and expeditiously.

In addition to the information concerning each immigrant heretofore obtained by the inspection officers, a record of illiteracy will hereafter be preserved, by stating upon the register opposite each name whether the person can read and write.

Alien Contract-Labor Laws.

Good progress has been made during the past year in the matter of enforcing the provisions of the Alien Contract-Labor Laws. The fact that such laws are on the statute books, prescribing serious penalties for the their infraction, has of itself had a most salutary effect and tended greatly to prevent all law-abiding citizens from attempting the importation of alien laborers under contract. Prosecutions have been instituted wherever sufficient evidence could be procured, and these, with resulting convictions, have had a wholesome deterrent effect upon such employers as might not be influenced by a mere knowledge of the illegality of the prohibited traffic in alien labor. Thus the effectiveness of the laws in question is not measured or indicated by the number of prosecutions brought thereunder, nor by the number of contract laborers intercepted and returned.

In June last I appointed a commission of five persons, who spent the summer months in various parts of Europe, making a careful study of the immigration question, with special regard to the illegal importation hither of alien laborers under contract. The report of that commission is now in course of preparation, and upon its completion I shall expect to lay the same before Congress, accompanying it with such suggestions as shall seem pertinent.

CHINESE EXCLUSION.

The Department has been unremitting in its efforts to enforce the Chinese Exclusion Acts, but with only partial success.

The law provides that Chinese laborers found to be unlawfully within the United States shall be removed therefrom to "the country from whence they came," and appropriations have been made from time to

time by Congress to carry this provision of law into effect. It was found that these prohibited persons were gaining access to the country from the contiguous foreign territories of Mexico and Canada, where they were landed direct from China without hindrance, except the imposition of a head-tax of \$50 by the Canadian Government. It was obviously useless to return these people to Mexico or Canada, whence they could seek new and probably successful entrance into the United States, and in the opinion of the Department it was the purpose and intent of the law to return them to China as the country from whence they came, whether they gained admission directly from China or through the avenue of a foreign country.

If any doubt had previously existed it seemed to be set at rest by a specific appropriation by Congress both in 1890 and 1891, to enforce the law and return to China all Chinese persons found to be unlawfully within the United States.

The Department therefore ordered all such persons returned to China, regardless of the avenue of their entrance into this country, with such success that Chinese immigration was practically broken up on the Mexican frontier and measurably checked on the Canadian frontier. But within the last few months the instructions of the Department for deportation to China have been stayed in some instances by the action of the courts in returning such persons to Canada as the country from whence they came, and while the Department has not relaxed its efforts to enforce the law, it has been unable, as a result of such judicial action, to withstand the great influx of Chinese laborers along our Canadian border. It is undoubtedly true that the Chinese population of the United States has been considerably increased within the past year by the addition of Chinese laborers who have entered by way of Canada. Syndicates have been formed and much capital has been invested to further this unlawful immigration, and if it is still the purpose of Congress to prohibit it, a thorough revision of the statutes relating to the subject is necessary.

Four acts of Congress relate to the exclusion of Chinese laborers from the United States. These acts bear date May 6, 1882; July 5, 1884; September 13, 1888, and October 1, 1888, respectively. The act of May 6, 1882, suspended the immigration of Chinese laborers from and after the period of ninety days from the passage of such act and until the expiration of ten years next after the date thereof. The act of July 5, 1884, amended certain sections of the act of May 6, 1882, but did not change the period within which its operations were limited. The act of September 13, 1888, provided for the repeal of the acts of May 6, 1882, and

July 5, 1884, such repeal to take effect upon the joint ratification of the treaty then pending between the United States and China; but such treaty has not been ratified, and the Attorney-General has expressed the opinion that the act of September 13, 1888, is not in force. The acts of May 6, 1882, and July 5, 1884, therefore still control. By the act of October 1, 1888, it is made unlawful for any Chinese laborer who shall at any time have been a resident of the United States, and who shall have departed therefrom, to return to the United States. Unless, therefore, Congress shall enact new legislation upon the subject, it would seem that any Chinese laborer may lawfully enter the United States after May 6, 1892, unless he shall have previously resided here, in which case his admission is prohibited.

Any legislation, however, looking to exclusion will fail of its full purpose so long as the Canadian Government admits Chinese laborers to Canada, whence, armed with Canadian permits to leave and return to Canada at pleasure, they are at liberty to invade our territory along its entire northern frontier.

REVENUE-MARINE SERVICE.

The performance of the regular duties of the revenue cutters has continued in a faithful and efficient manner. Thirty-six vessels in commission during the year have cruised for the protection of the revenue a distance of 301,416 nautical miles, and have boarded and examined 36,962 vessels, of which number 1,042 were found violating the law.

The fines incurred by reason of these violations amounted to \$334,046.94. In addition, 123 distressed vessels were assisted, the value of the vessels and their cargoes amounting to \$2,806,056. Revenue cutters, furthermore, have rescued from the water during the past year, and in actual danger of drowning, 26 persons.

Material aid has been rendered during the year to the Life-Saving Service, a distance of 9,915 miles having been cruised by revenue cutters on this duty alone.

The expenditures on account of the Revenue-Cutter Service for 1891 have been \$934,995.22, of which sum \$26,816.59 was used in enforcing the provisions of the act of Congress, approved May 16, 1888, regulating the anchorage of vessels in the bay and harbor of New York.

The personnel of the Revenue Marine consists of 220 commissioned officers, 28 pilots, and 815 enlisted men.

The special duty of enforcing the provisions of the anchorage regulations of the waters of New York harbor has been continued by the revenue steamer *Manhattan*. During the year 1,375 vessels were found im-

properly anchored, and of this number 809 were assisted to a proper anchorage. The remaining vessels moved on being notified to do so.

The work of the revenue-cutter fleet during the past year has been one of marked activity. The duty performed has been both varied and general. It embraced operations of more than ordinary importance in Bering Sea, in connection with the Eastern fisheries, on the Bahama Banks, the Florida coast, and in Puget Sound. Many of these operations dealt with issues of an international nature, and required throughout a nicety of judgment on the part of those engaged. The prompt and efficient manner with which revenue cutters have responded to demands for special work is creditable to both officers and crews, and leaves no reason to believe that there is any falling off from that high standard of efficiency which has so long characterized the Revenue Marine.

In the early part of April of this year the revenue steamer *Bear* made a special cruise to western Alaska in the interest of the Department of Justice, for the purpose of arresting criminals and securing witnesses who could not be reached without a special vessel. Later she conveyed to Icy Bay the Russell exploring expedition, sent out under the auspices of the National Geographic Society of Washington, D. C. This vessel has also given transportation to the commissioner of education for Alaska, and the necessary supplies for the Indian schools in Arctic Alaska. The *Bear* had on board the supplies for the Point Barrow Refuge Station, but was unable to reach that point this season on account of the heavy field ice, which prevented the whaling fleet from proceeding farther north than Point Belcher. She rendered valuable assistance to a number of whalers, and returning, reached Unalaska September 17, when she resumed guard duty around the Seal Islands, where she will remain until after December 1.

It was learned that the crew of the schooner *Silver Wave*, of San Francisco, wrecked late last year near Point Barrow, were furnished shelter and subsistence during the winter at the Point Barrow Refuge Station.

The revenue steamer *Rush* sailed from San Francisco on May 27 for the Seal Islands, and during the summer cruised 11,088.8 miles in the Bering Sea for the protection of the Government interests in that region and the enforcement of the provisions of the President's proclamation, and the *modus vivendi* with Great Britain. She boarded in the sea 23 vessels, 13 of them seal hunters, which were notified to leave the sea at once. The *Rush* seized one vessel, the British schooner *E. B. Marvin*, of Victoria, for noncompliance with the provisions of the proclamation, after having been warned by the United States steamship

Thetis. The *Rush* returning from her cruise reached San Francisco October 2, and sailed again October 19, to remain in the vicinity of the Seal Islands until December 1 next.

The revenue steamer *Corwin* sailed from San Francisco June 17 for Bering Sea, carrying copies of the President's proclamation and instructions for its enforcement to the other revenue steamers on duty in Alaskan waters, and to the Treasury agents on the Seal Islands. During the season she cruised 9,862.8 miles; boarded and notified 10 seal hunting vessels to leave the sea, and seized 2, the American schooners *La Ninpha*, of San Francisco, and *Ethel*, of San Diego, Cal., for non-compliance with such notice. These cases have since been tried in the United States district court of Alaska, and the vessels were condemned.

A number of new vessels are urgently needed for the proper maintenance of the service. With a fleet of thirty-six vessels it will be readily seen that unless new craft are added to the fleet annually the service must gradually become depleted.

The rapidly increasing commerce on the Great Lakes, the Pacific coast, and Puget Sound; the large number of Chinese subjects unlawfully landing on our shores, and the enormous quantities of opium believed to be smuggled into the United States from contiguous foreign territory; the additional service demanded of the revenue-cutter fleet in protecting Government interests in Alaska, all require new and more efficient steamers. There is, in consequence, immediate and urgent need for two able cruising steamers for the Pacific coast and two for Lakes Michigan and Ontario, respectively. To meet any sudden contingency, these vessels should possess features and characteristics enabling them to meet demands other than those for assistance to distressed vessels and the enforcement of the customs-revenue laws. This fact has not been lost sight of in the general designs outlined.

There is further need at San Francisco for a new boarding steamer. The vessel now engaged on this duty is too small for the efficient performance of the work assigned to her.

LIGHT-HOUSE SERVICE.

The number of light-stations was increased from 833 to 852. Three first-class light-ships have been finished and placed on stations on the Atlantic coast. Three other less expensive light-ships are being built for service on the Great Lakes, and will be finished in time to be put on stations this fall. The construction of four other first-class light-ships, three for service on the Atlantic and one on the Pacific coast, has been commenced. They are to have the best illuminating

apparatus and fog-signals, and are to be moved to and from their stations by their own steam power.

The Board has two first-class steam tenders well under construction, and the plans of a third are nearly finished.

The number of buoys, spindles, and day marks was increased from 4,651 to 4,715 during the last fiscal year. The appropriation for expenses of buoyage last year was \$335,000, an increase of \$55,000 over the preceding year. With this the Board was able to maintain these aids to navigation and make a slight addition to their number, but not as many as were needed.

The number of lights on navigable rivers was increased from about 1,600 to about 1,700; as the increase was mostly on eastern rivers, where it costs more to build and maintain them than it does on western rivers, the average cost was brought up from \$160 to about \$170 per year each. As each of these river lights serves the purpose that was formerly attained by a light-house costing very much more to build and many times more a year to maintain, it is deemed judicious as well as economical to increase their number. The Board asks an increased appropriation for this purpose.

The Light-House Board, in its annual report, again urges that the exhibition of private lights should be prohibited, and that a penalty be provided by law for the infraction of its regulations as to the lighting of bridges over navigable streams.

MARINE-HOSPITAL SERVICE.

The report of the Supervising Surgeon-General* shows that during the last year there were 52,992 sailors treated in the various marine hospitals and dispensaries; that there were 1,133 surfmen and keepers of the Life-Saving Service examined physically, of which number 59 were rejected for disease or disability; that there were 1,182 pilots examined for color blindness, of which number 29 were rejected; and that 243 seamen were examined physically as a prerequisite to their enlistment in the Revenue-Marine Service, of which number 38 were rejected.

The balance of funds available at the commencement of the fiscal year was \$106,295.77, and the receipts from all sources during the year (tonnage tax and repayments for care and treatment of foreign seamen, etc.) were \$533,760.77. The expenditures were \$564,528.53, leaving a balance on hand at the close of the fiscal year of \$75,528.01. The balance of the appropriation for the prevention of epidemic diseases available June 30, 1891, was \$157,174.32.

* Omitted from this compilation.

During the year the eight quarantine stations have been in operation, including the new quarantine station on Angel Island, San Francisco Bay, which was opened for service in April. There were 1,664 vessels inspected at the national quarantines, of which number 113 were detained for disinfection. At the Gulf Quarantine Station, on Chandeleur Islands, 46 vessels, badly infected with yellow fever, were held and disinfected, and 12 yellow-fever patients were taken from these vessels into the lazaretto. As a result not a single case of yellow fever developed on the coast guarded by this quarantine.

The other stations were also successfully administered, and the Southern cities have been entirely free from this much-dreaded disease during the past summer.

The Supervising Surgeon-General calls attention to the increased number of cases of leprosy discovered in the United States, and suggests the necessity of a national asylum where these lepers may be permitted to enjoy as much freedom as possible, and yet be removed from contact with other people. Pertinent correspondence relating to this matter is embodied in his report.

Owing to the prevalence of cholera in the East, and to a want of uniformity in the local health regulations at several of the ports of entry in the United States, a circular has been recently issued prohibiting the entry of rags imported from Marseilles unless previously disinfected. It may be necessary to extend the provisions of this circular to other ports where such rags are rebaled and reshipped.

The services of this Bureau of the Government, in aid of the general public health, find further illustration in the copies of correspondence regarding notification to State boards of health of immigrants arriving from infected ports or on infected vessels, and also in the immigration law, in which the duty of inspection of immigrants to be rejected on account of disease is placed upon the officers of this service.

The sanitary inspection service has been rigidly maintained at the port of Havana during the year by the sanitary inspector of the Marine-Hospital Service and his assistant, who examined 636 vessels at that port. Five thousand and twenty-four applicants for certificates to enable the entry of the applicants into the United States during the quarantine season were examined by the sanitary inspector, and certificates were refused to 455 applicants, because through want of acclimation (Havana being an infected port) these persons might convey disease into the United States.

A sanitary inspection has also been maintained on the Mexican frontier at El Paso, Tex.

Interesting investigations have been in progress in the two bacteriological laboratories of the service, and a special report is made by the medical officer in charge of the chief laboratory, who was detailed for observation and study in the laboratories of Professors Koch and Pasteur.

Sanitary reports and statistics have been published weekly throughout the year.

The twenty marine hospitals of the United States are reported generally in good condition.

STEAMBOAT-INSPECTION SERVICE.

The personnel of this service, at the end of the fiscal year, consisted of 152 officers, clerks, and messengers. The number of steam-vessels inspected, belonging to the United States, was 7,404, having 1,503,324.40 net tonnage. The number of foreign steam-vessels inspected was 295.

The number of passengers carried on American steamers, it is estimated, was over 500,000,000. The number of lives lost by various accidents was 338.

The expenses of the domestic service were \$273,295.29 for the fiscal year, and for the foreign service were \$12,953.56.

The services of the officers known as special foreign inspectors have been dispensed with, and the work is all done by the officers of the domestic service, under special appointments as acting special inspectors without pay, thereby saving the salaries formerly paid the special inspectors. It is recommended that the laws providing a separate class of officers for the inspection of foreign steam-vessels be repealed; a better service is obtained by having such inspections made by the officers of the domestic service, as is now done under Departmental authority.

Urgent reasons for the proposed legislation are fully set forth in the Secretary's Report on the Finances, 1890, as follows:

The offices proposed to be abolished are virtually sinecures, and much sought after in consequence, and until they are abolished the Executive will remain subjected to importunity to fill them.

Legislation is also asked for regulating the pay of inspectors, great inequality now existing in that respect; and to provide punishment for fraudulently changing or interpolating licenses issued to officers of steam-vessels, and for false swearing by applicants for such officers' licenses.

LIFE-SAVING SERVICE.

At the close of the year there were in operation 238 life-saving stations, 6 having been put in commission and 1 discontinued during the year. The following statistics give a summary of their operations: The number of disasters to documented vessels within the field of station operations was 331, on board of which were 3,147 persons, of whom 3,105 were saved and 42 lost. The estimated value of the property involved was \$6,910,380, of which \$5,677,890 was saved and \$1,232,490 lost. The number of vessels totally lost was 62. Besides the foregoing there were 160 disasters to smaller craft (sailboats, row-boats, etc.), on which were 344 persons, of whom 336 were saved and 8 lost. The property involved in the latter disasters amounted to \$110,425, of which \$106,070 was saved and \$4,355 lost. The following is the aggregate:

Total number of disasters.....	491
Total value of property involved.....	\$7,020,805
Total value of property saved.....	\$5,783,960
Total value of property lost.....	\$1,236,845
Total number of persons on board.....	3,491
Total number of persons saved.....	3,441
Total number of persons lost.....	50
Total number of shipwrecked persons succored at stations....	551
Total number of days' succor afforded.....	1,516
Number of vessels totally lost.....	62

Besides the persons saved from vessels as shown above, 46 others were rescued who had fallen from wharves, etc., and would probably have perished but for the aid of the life-saving crews. The assistance rendered by the service in saving vessels and cargoes was unusually effective, a larger amount of property being saved in proportion to that imperiled than in any former year, with the single exception of 1884. Aid was given to 470 vessels in getting them afloat when stranded, repaired when damaged, piloted out of dangerous places, etc. There were also 210 instances in which vessels in danger of stranding were warned off by the signals of the patrolmen.

The cost of the maintenance of the service during the year was \$940,201.04.

Since the date of the last report the stations referred to therein as being in process of construction at Knobb's Beach (near Newburyport) and Great Neck (Nantucket), Massachusetts; Marquette and Bois Blanc Island, Michigan; and Umpquah River, Coos Bay, and Coquille River, Oregon, have been completed and manned for service. One station, located at Neah Bay, in the Straits of Fuca, which was under

the charge of a keeper without crew, has been discontinued under the provisions of section 2 of the act of May 4, 1882, which authorizes the Secretary of the Treasury to discontinue any station whenever, in his judgment, the interests of commerce and humanity no longer require its existence. Preliminary steps have also been taken looking to the discontinuance of the Cape Malabar House of Refuge, Florida.

New stations are now building at Burnt Island (near the mouth of St. George's River), Maine; Quonocontaug, Rhode Island; Fenwick's Island, Delaware, and Ilwaco Beach, Washington.

Extensive repairs and improvements have been made during the year to 26 stations on the coasts of Virginia and North Carolina, and similar work is now in progress on several of the stations on the coasts of Delaware, Maryland, and Virginia. The Sandy Hook, Seabright, and Cold Spring Stations, New Jersey, and the Ocean City Station, Maryland, have been rebuilt; and a new building is being erected at Gurnet (near Plymouth), Massachusetts, to replace the old station, which will be utilized for a boat house and other purposes. The Ditch Plain Station, coast of Long Island, having been struck by lightning and destroyed on the night of February 28 last, a new station is in progress of construction to supply its place.

The telephone system of the service has been considerably extended during the year by short lines connecting stations in the neighborhood of cities with local systems, by means of which steam-tugs and other aids can be readily summoned on occasion of disaster, and a new line is being built from station to station along the Rhode Island coast.

The last two annual reports of the Secretary called attention to the inadequacy of the compensation allowed to the keepers and crews of stations, upon whose skill, bravery, and honest devotion to most perilous and exacting duty the good name of the service and the lives of imperiled mariners depend. In the last report it was shown that during that year more than 30 per cent. of the trained men had left the stations in the Lake districts, and a somewhat smaller percentage on the ocean coasts, for more lucrative employment, occasioning considerable embarrassment to the service. This exodus has increased during the past year, and its continuance can not fail to seriously affect the efficiency of the corps. Many of the remaining veterans are only retained by the hope of better wages, which the repeated recommendations of the Department and the justice of the case have excited. The hope is earnestly expressed that the relief, which simple justice to the men and the preservation of the high standard of efficiency which this service has hitherto maintained alike demand, may not be longer deferred.

COAST AND GEODETIC SURVEY.

Among the operations referred to by the Superintendent of the Coast and Geodetic Survey in his annual report,* the following may be named as of special importance: Surveys relating to the location of a part of the northeastern boundary line between the United States and the Dominion of Canada; resurvey of Nantucket Shoals; observations of tides, currents, densities, and temperatures in Long Island Sound and to the south of Martha's Vineyard, in coöperation with the work of the U.S. Fish Commission; completion of the detailed topographical survey of the District of Columbia; observations begun at Rockville, Md., and at San Francisco, Cal., for ascertaining the variations of latitude, in coöperation with the work of the International Geodetic Association; survey for the site of a light-house on Cape Hatteras Shoals; continuation of the investigations in the Gulf Stream, and preparation for publication of a volume relating to the methods of the investigation and the results of the research; connection of the primary triangulation on or near the 39th parallel advancing to the westward in the State of Indiana with that advancing to the eastward in the same State; extension to Kansas City of the transcontinental line of geodetic leveling; reconnaissance along the boundary line on the Rio Grande between the United States and Mexico; establishment off the coast of California, at the request of the Navy Department, of a trial course for the new naval cruiser *San Francisco*; advance of the primary triangulation in California by the occupation of Mount Conness; special surveys of harbors in Puget Sound for the Harbor Line Commission of the State of Washington, and continuation of the preliminary operations relating to the location of the boundary line between Alaska and the British Possessions in North America.

Advantage was taken by the Superintendent of opportunities afforded by his visit of inspection to the Pacific coast to determine gravity with new and improved apparatus at a number of stations in California, Washington, and Alaska. In compliance with a request from the International Geodetic Association, and with the sanction of the Secretary of the Treasury, an officer of the Survey was instructed to proceed to the Hawaiian Islands and aid an officer detailed by that Association in observations relating to the variations of latitude. He was further directed to determine simultaneously with latitude the force of gravity at sea-level, and also, when practicable, near the summit of Mauna Kea.

* Omitted from this compilation.

The demand for the charts of the Survey has for some years past exceeded the capacity of the office presses, but new presses and increased working room, soon to become available, will probably enable all public requirements to be met.

During the fiscal year 1891, there were issued 52,959 copies of charts, 3,153 of which were for the use of Congress, 2,651 for the Executive Departments, and 31,465 to sale agents. Of Notices to Mariners—issued monthly or oftener, as occasion demanded—139,000 copies were printed for free distribution. The publication of Coast Pilots and Tide Tables was continued. Of the Coast Pilots for the Atlantic and Pacific coasts, 1,052 copies were distributed. The manuscripts of the Tide Tables, predicting times and heights of high and low waters on the Atlantic and Pacific coasts for 1892, were sent to press before the close of the fiscal year.

The building known as the Richards building, so long occupied by the Coast and Geodetic Survey, was purchased for the use of that Bureau by an appropriation in the Sundry Civil Act of March 3, 1891. In the same act the purchase of the Butler building adjoining, a part of which had long been used by the same service, was also provided for, my predecessor having recommended to Congress that it be bought for the use of the Survey, to afford a much needed increase in the facilities for printing and publishing charts.

Before the close of the fiscal year, however, it became imperative to make new provision for the Marine-Hospital Service, and it was necessary to utilize the greater part of the Butler building for this purpose.

A new building, much more perfectly adapted to the needs of the Coast and Geodetic Survey, can be erected at comparatively small cost on the ground belonging to the Richards building, and, knowing the need for increased room for the proper execution of this important branch of the public service, I respectfully recommend and urge Congress to provide at an early day for the erection of such a building.

Office of Weights and Measures.

The work of constructing sets of standard weights and measures for the States that have not yet received them was continued in the Office of Weights and Measures. Comparisons of thermometers were made for the Internal-Revenue Bureau; comparisons of coin weights for the United States Mint at San Francisco, and of series of test weights for the United States Mint at Carson City, Nev. At the request of the Secretary of the Treasury an examination was undertaken of the standards in use in the sugar laboratories of the appraisers' offices in Bos-

ton, New York, and Philadelphia, and carried to a successful conclusion. Subsequently, at the request of the Commissioner of Internal Revenue, a commission consisting of experts representing the Department of Agriculture, the Internal-Revenue Bureau, and the Office of Weights and Measures was organized with a view of deciding upon improved methods in the analysis of sugars, and of framing regulations for determining the polarization of those upon which a bounty is paid.

For the reasons stated in the last report of my predecessor, I renew the recommendation made by him that the metric system of weights and measures be made obligatory in transactions at United States custom-houses from and after the first day of the calendar year 1895.

ENGRAVING AND PRINTING.

The work of the Bureau of Engraving and Printing during this year exceeded that of any other for fourteen years, a considerable portion of this increase being the Treasury notes provided for by the act of July 14, 1890. So great was the demand for these and other small notes that it was necessary to work the larger part of the force of the Bureau overtime throughout the entire year. During a portion of the time work commenced at 7 a. m. and continued until 6:30 p. m. In view of this large increase of work, it became necessary to adopt some method of executing at least a part of the printing more rapidly than by the methods heretofore in use. After full and careful consideration of the matter, the Chief of the Bureau recommended that the internal-revenue stamps, known as strip tobacco stamps, be printed from steel plates engraved in relief, which would permit of the printing of these stamps at the rate of 7,000 to 8,000, instead of from 700 to 800, sheets per press daily, as by the method of printing from intaglio plates. Samples of stamps printed by this method were submitted, and after full investigation by the Commissioner of Internal Revenue, the recommendation of the Chief of the Bureau of Engraving and Printing was approved by the Department, and the stamps are now being printed by this method. It is estimated that a saving of about \$156,000 a year will be effected by this change.

The erection of the additional wing to the Bureau building, authorized by Congress, progressed steadily during the year, and it is now finished and occupied by the Bureau. The additional facilities afforded by this wing, together with the change in the method of printing the strip tobacco stamps, permits of the execution of the work of the Bureau within the regular hours for business—that is, from 8 a. m. to 4 p. m. daily. The business of this Bureau is now in a very satisfactory condition.

PUBLIC BUILDINGS.

There were 392 public buildings completed and occupied, in course of construction, not yet commenced, and for which properties for sites had been, or were being, selected, and titles thereto acquired, under the control of the Treasury Department and the supervision and direction of the office of the Supervising Architect during the year ending September 30, 1891, of which number—

One hundred and twenty were in course of construction, including those to which extensions or additions, alterations, and repairs were being made under special appropriations, and sites were selected or being selected.

Two hundred and fifty were completed prior to September 30, 1890, and 19 were completed and 3 were purchased during the past year, making 272 completed and occupied; and all work of repairs thereon, or the repairs to the heating, hoisting, and elevator apparatus therein, were properly chargeable to the general appropriations.

Seventy-eight sites and buildings were authorized during the first and second sessions of the Fifty-first Congress.

Eleven sites remain to be selected.

The amount of money expended on public buildings for the year ending September 30, 1891, is as follows:

For sites and in the construction of new public buildings, extensions and repairs specially provided for.....	\$5, 514, 250 88
For repairs and preservation of public buildings.....	228, 644 10
For heating apparatus for public buildings.....	119, 745 19
For vaults, safes, and locks for public buildings.....	48, 304 98
For photographic duplication of the plans for public buildings.....	3, 484 18
For vaults for storage of silver, New Orleans, La., and San Francisco, Cal.....	34, 273 55
Total expenditure	5, 948, 702 78

Among the recommendations of the Supervising Architect to which the attention of Congress is invited is that suggesting the enactment of a general law directing the mode of acquiring sites for public buildings, preparation of plans, and proceeding with the work of construction, leaving for special legislation simply the designation of the place to be provided for and the sum to be appropriated. At present the numerous individual acts providing for public buildings repeat these directions in substantially the same language, thus encumbering the statutes unnecessarily. Another recommendation worthy of attention is that suggesting a law providing for a corps of superintendents of construction

of public buildings, thus giving to the service superintendents especially selected because of their fitness, and further qualified by their constant experience, in the place of temporary local appointees in too many instances unqualified for their important duties.

CLAIMS.

The importance of providing some limitation of time within which claims against the Government shall be prosecuted, or, for want of such prosecution, be forever barred, is urged upon the attention of Congress.

It may be assumed that any claim in behalf of an individual who is in a situation to present it will, if well founded, be presented for payment within six years from the time when the claimant's right first accrued. Such limitations form part of the codes of all civilized nations, and experience has shown that, as between individuals, less injustice is done by the conclusive presumption that claims, thus delayed beyond a reasonable time, are unfounded or have been adjusted, than by allowing them to be prosecuted after witnesses to the transaction have died or been lost sight of, and other evidence has been destroyed.

The presumption is much stronger in case of a claim against the Government than in one against an individual. The Government is always solvent and can always be found, and it is difficult to suggest a reason why a valid claim against it should not be presented within the term of six years.

Under the present circumstances, it is impossible to administer equal justice to those who present old claims. The Comptrollers and Commissioner of Customs have by law the final determination of all claims coming within their jurisdiction, and while one of them, or the Auditor who first considers the claim, may reject it because its prosecution has been for many years delayed, and he therefore believes it to be unfounded, another officer feels it his duty to examine it upon such evidence as may still exist, because Congress has not interposed a statute of limitation in bar of its allowance. The First Comptroller, in his report,* has called special attention to the importance of some limitation of this character.

It is recommended, therefore, that it be provided by law that no claim pending in any of the Executive Departments shall be allowed unless presented for payment within six years after such claim first accrued, with the usual exception in favor of claimants disqualified by age or otherwise, from prosecuting claims within such time.

The First Comptroller also recommends in his report that the act of March 3, 1887 (24 Stat., 505), providing for the bringing of suits against

* See Appendix, page 501.

the Government, be amended or repealed; that additional legislation be had touching the subject of double compensation to public officers; and that provision be made for turning into the Treasury the balance on June 30, 1891, standing to the credit of the appropriation for "deposits by individuals for surveying public lands."

WORLD'S COLUMBIAN EXPOSITION.

Work is progressing satisfactorily in the preparation of a suitable contribution by the Treasury Department to the Government exhibit at the World's Columbian Exposition. Pursuant to the provisions of law, the Supervising Architect of the Treasury has completed suitable plans for the Government Exposition building. A contract for the construction has been approved, involving an expenditure of \$316,767, and work is going forward upon the structure.

SEAL ISLANDS.

It has been well known to the Department for some years that there was a marked diminution in the number of seals returning annually to the Pribyloff Islands. This decrease affected the rookeries so seriously that a *modus vivendi* was entered into between the United States and Great Britain, by the terms of which the number of seals to be killed on the islands between June 15, 1891, and May 1, 1892, was limited to 7,500, and their destruction in that part of Bering Sea lying eastward of the line of demarcation described in article I of the treaty of 1867 was prohibited for the same period.

From reports made by the Treasury agents at the islands, who were instructed to investigate the subject, it would seem that the killing of vast numbers of female seals in the open waters by pelagic hunting is the prime factor in the rapid decrease of seals, and if persisted in will undoubtedly result in the speedy annihilation of these valuable fur-bearing animals. This will more clearly appear when it is stated that although the proclamation of the *modus vivendi* was issued on June 15, 1891, more than 50,000 skins were taken by sealing schooners during the past season, and as but a small percentage of the seals killed at sea are secured, the figures given would indicate the actual destruction of many times that number.

It would therefore seem that restrictive measures are imperatively needed for the protection of this valuable animal, which contributes so largely to the wealth and comfort of the world at large. Attention is also invited to the fact that on the islands of St. Paul and St. George there are 300 native inhabitants who are supported by their labor in

taking seals for the lessees of the islands, and as this industry is affected by the operations of the pelagic sealers, the natives who, to some extent at least, may be regarded as the nation's wards, must be provided for from the public funds.

There are other matters relating to this subject to which at the proper time I may deem it advisable to invite the attention of Congress.

RECORD OF REAL PROPERTY BELONGING TO THE UNITED STATES.

Attention is again invited to the need of legislation to provide suitable registry of deeds and other evidences of title to real property acquired and held for the use of the United States.

These instruments are now deposited in various offices in the several Departments, and their production when required often involves much labor and research, which would be obviated by collecting them into one place of deposit and record.

This would also afford means of ready reference to the history of titles, and better assure the discovery and perfecting of defective and disputed titles, and the recovery of property which, through disuse or otherwise, has been lost sight of and come into the wrongful possession of private parties.

OFFICIAL FILES OF THE GOVERNMENT.

My predecessors for many years past have called the attention of Congress to the importance of providing a suitable building, centrally located, for the safe and convenient keeping of the official records, documents, and papers of the Government. The importance and urgency of this matter cannot be overstated, and I earnestly recommend that early and favorable action be taken by Congress looking to the erection of such a building.

DISTRICT OF COLUMBIA.

The net expenditures on account of the District of Columbia for the fiscal year 1891 were \$5,635,510.61. The revenues deposited in the Treasury on this account, for the same period, were \$2,853,897.74.

There have been issued during the fiscal year 1891, \$50,750 of the 3.65 per cent. bonds, in satisfaction of judgments of the Court of Claims against the District. There have been retired by the operations of the sinking-fund during the same period \$331,500 of the bonded indebtedness of the District, making a net reduction of \$280,750, and reducing the annual interest charge \$16,982.

The net reduction in the bonded debt since July 1, 1878, is \$2,606,350, and in the annual interest charge \$177,339.72. The bonded debt July 1, 1891, was \$19,500,300, of which there were due and payable on that date \$2,490,200 6 per cent. bonds and \$276,700 7 per cent. bonds. To provide for the payment of these bonds Congress, by act approved March 3, 1891, authorized the issue of 3.50 per cent. bonds, and the Treasurer, in compliance with the provisions of the law, caused the bonds to be prepared, advertised, and has sold \$2,400,000 at a premium of five hundred and thirty-one one-thousandths per cent., realizing the sum of \$2,412,744, to be applied to the redemption of the matured bonds. The act also authorized the sale of sufficient 3.50 per cent. bonds to pay the bonds maturing in 1892.

The amount realized from the sale of bonds in which the retentions from contracts with the District of Columbia were invested, in excess of the amount due the contractors, have been deposited in the Treasury as a miscellaneous receipt to the credit of the United States and District of Columbia in equal parts, as required by the act of February 25, 1885. The net surplus from this source at the close of the fiscal year 1890 was \$30,676.18. During the fiscal year 1891, in settlement of these accounts, the sum due the contractors is in excess of the amount realized from the sale of bonds, showing a net loss of \$2,609.22, reducing the net surplus at the close of the fiscal year 1891 to \$28,066.96.

The detailed information in regard to the affairs of the District of Columbia will be found in the report to be submitted by the District Commissioners and by the Treasurer of the United States, *ex-officio* commissioner of the sinking fund of the District.

REPORTS OF HEADS OF BUREAUS.

The several reports of the heads of offices and bureaus are herewith transmitted.

CHARLES FOSTER,
Secretary of the Treasury.

The Honorable

THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

REPORT OF THE SECRETARY OF THE TREASURY. 101

TABLE B.—STATEMENT OF OUTSTANDING PRINCIPAL OF THE PUBLIC DEBT OF THE UNITED STATES ON THE 1ST OF JANUARY OF EACH YEAR FROM 1791 TO 1843, INCLUSIVE, AND ON THE 1ST OF JULY OF EACH YEAR FROM 1843 TO 1891, INCLUSIVE.

Year.	Amount.	Year.	Amount.
Jan. 1, 1791.....	\$75,463,476.52	Jan. 1, 1842.....	\$13,594,480.73
1792.....	77,227,924.66	1843.....	20,201,226.27
1793.....	80,358,634.04	July 1, 1843.....	32,742,922.00
1794.....	78,427,404.77	1844.....	23,461,632.50
1795.....	80,747,587.39	1845.....	15,925,305.01
1796.....	83,762,172.07	1846.....	15,550,202.97
1797.....	82,094,479.33	1847.....	38,826,534.77
1798.....	79,228,529.12	1848.....	47,044,892.23
1799.....	78,408,969.77	1849.....	63,061,858.69
1800.....	82,976,294.35	1850.....	63,453,773.55
1801.....	83,038,050.80	1851.....	68,304,796.02
1802.....	80,712,632.25	1852.....	66,199,341.71
1803.....	77,054,686.40	1853.....	59,803,117.70
1804.....	86,427,120.88	1854.....	42,242,222.42
1805.....	82,312,150.50	1855.....	35,586,956.56
1806.....	75,723,270.66	1856.....	31,932,537.90
1807.....	69,218,398.64	1857.....	28,699,831.85
1808.....	65,196,317.97	1858.....	44,911,881.03
1809.....	57,023,192.09	1859.....	58,496,837.88
1810.....	53,173,217.52	1860.....	64,842,287.88
1811.....	48,005,587.70	1861.....	90,580,873.72
1812.....	45,209,737.90	1862.....	524,176,412.13
1813.....	55,962,827.57	1863.....	1,119,772,138.63
1814.....	81,487,846.24	1864.....	1,815,784,370.57
1815.....	99,833,060.15	1865.....	2,680,647,869.74
1816.....	127,334,933.74	1866.....	2,778,236,173.69
1817.....	123,491,965.16	1867.....	2,678,126,103.87
1818.....	103,460,033.83	1868.....	2,611,687,851.19
1819.....	95,529,648.28	1869.....	2,588,452,213.94
1820.....	91,015,566.15	1870.....	2,480,672,427.81
1821.....	99,987,427.66	1871.....	2,353,211,332.32
1822.....	93,546,676.98	1872.....	2,253,251,328.78
1823.....	90,875,877.28	1873.....	*2,294,483,993.20
1824.....	90,269,777.77	1874.....	*2,251,690,468.43
1825.....	83,788,432.71	1875.....	*2,232,284,531.95
1826.....	81,054,059.99	1876.....	*2,180,395,067.15
1827.....	73,987,357.20	1877.....	*2,205,301,392.10
1828.....	67,475,043.87	1878.....	*2,256,205,892.53
1829.....	58,421,413.67	1879.....	*2,349,567,482.04
1830.....	48,565,406.50	1880.....	*2,120,415,370.63
1831.....	39,123,191.68	1881.....	*2,069,013,569.58
1832.....	24,322,235.18	1882.....	*1,918,312,994.03
1833.....	7,001,698.83	1883.....	*1,894,171,728.07
1834.....	4,760,082.08	1884.....	*1,890,528,923.57
1835.....	37,733.05	1885.....	*1,876,424,275.14
1836.....	37,513.05	1886.....	*1,756,445,205.78
1837.....	330,957.83	1887.....	*1,688,229,591.83
1838.....	3,306,124.07	1888.....	*1,705,992,20.58
1839.....	10,434,221.14	1889.....	*1,640,673,340.23
1840.....	3,573,343.82	1890.....	*1,585,821,048.73
1841.....	5,250,875.54	1891.....	*1,590,472,784.61

* In the amount here stated as the outstanding principal of the public debt are included the certificates of deposit outstanding on the 30th of June, issued under act of June 8, 1872, for which a like amount in United States notes was on special deposit in the Treasury for their redemption, and added to the cash balance in the Treasury. These certificates, as a matter of accounts, are treated as a part of the public debt, but being offset by notes held on deposit for their redemption should properly be deducted from the principal of the public debt in making comparison with former years.

† Exclusive of gold, silver, currency certificates, and Treasury notes of 1890, held in the Treasury's vault, and including \$4,623,512 bonds issued to the several Pacific railroads.

TABLE C.—ANALYSIS OF THE PRINCIPAL OF THE PUBLIC DEBT OF THE UNITED STATES FROM JULY 1, 1856, TO JULY 1, 1891.

Year.	3 per cents.	5½ per cents.	4 per cents.	4½ per cents.	5 per cents.	6 per cents.	7½ per cent.	Total interest-bearing debt.
1856					\$4,622,000.00	\$28,130,761.77		\$31,702,761.77
1857					3,489,000.00	24,971,958.93		28,460,958.93
1858					23,538,000.00	21,162,838.11		44,700,838.11
1859					37,127,800.00	21,162,938.11		58,290,738.11
1860					43,476,300.00	21,154,538.11		64,640,838.11
1861					33,022,500.00	57,358,672.95		90,380,672.95
1862			\$87,926,116.57		30,483,000.00	154,313,225.01	\$122,582,488.34	365,304,856.92
1863			105,629,385.30		30,483,000.00	431,444,813.83	139,974,435.34	707,531,634.47
1864			77,547,696.07		300,213,480.00	842,882,652.09	130,286,938.34	1,359,930,763.50
1865			90,496,930.74		245,769,420.63	1,213,495,169.90	671,610,307.02	2,221,311,918.29
1865—August 31					269,175,727.65	1,195,546,041.02	830,000,000.00	2,394,721,768.67
1866			121,941,879.62		198,533,435.01	1,543,452,080.02	813,460,621.95	2,332,431,207.60
1867			17,725,025.68		221,586,183.01	1,578,303,984.50	468,344,846.95	2,248,067,357.69
1868	\$64,000,000.00		801,381.23		221,588,300.00	1,874,347,422.39	37,397,196.95	2,102,090,522.39
1869	66,125,000.00				221,588,300.00	1,705,317,422.39		2,046,453,722.39
1870	59,560,000.00				274,236,450.00	1,913,897,300.00		1,954,696,750.00
1871	45,885,000.00		678,000.00		414,567,300.00	1,574,858,800.00		1,814,794,100.00
1872	24,665,000.00		678,000.00		414,567,300.00	1,574,858,800.00		1,710,484,000.00
1873	14,000,000.00		678,000.00		510,628,550.00	1,213,824,500.00		1,738,420,750.00
1874	14,000,000.00		678,000.00		510,628,550.00	1,213,824,500.00		1,738,420,750.00
1875	14,000,000.00		678,000.00		510,628,550.00	1,213,824,500.00		1,738,420,750.00
1876	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1877	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1878	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1879	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1880	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1881	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1882	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1883	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1884	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1885	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1886	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1887	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1888	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1889	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1890	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00
1891	14,000,000.00				510,628,550.00	1,213,824,500.00		1,738,420,750.00

TABLE C.—ANALYSIS OF THE PRINCIPAL OF THE PUBLIC DEBT OF THE UNITED STATES, ETC.—Continued.
Year.

Year.	Debt on which the interest has ceased.	Debt bearing no interest.	Outstanding principal.	Cash in the Treasury July 1.	Total debt less cash in Treasury.	Amount interest charge.
1860—July 1	\$309,776.13	.....	\$21,973,377.90	\$21,095,584.00	\$1,877,793.90	\$1,877,793.90
1861	323,872.92	.....	22,609,831.04	21,590,831.04	1,019,000.00	1,019,000.00
1862	311,042.92	.....	44,911,681.04	7,011,680.31	37,900,000.73	37,900,000.73
1863	298,099.77	.....	58,400,837.88	5,093,693.69	53,307,144.19	53,307,144.19
1864	291,449.77	.....	64,842,287.88	4,877,885.67	59,964,402.21	59,964,402.21
1865	199,999.77	.....	92,170,112.72	2,862,212.92	89,307,900.80	89,307,900.80
1866	280,195.21	\$158,591,394.00	50,170,112.72	18,862,659.96	31,307,452.76	31,307,452.76
1867	473,048.16	.....	1,119,772,138.63	8,421,001.22	1,111,351,137.41	1,111,351,137.41
1868	473,048.16	.....	1,816,784,370.57	106,322,093.53	1,710,462,277.04	1,710,462,277.04
1869	473,048.16	.....	2,600,647,680.74	5,852,012.98	2,594,795,667.76	2,594,795,667.76
1870	1,503,026.09	401,616,311.51	2,844,640,026.56	88,212,009.18	2,756,428,017.38	2,756,428,017.38
1871	1,503,026.09	439,968,874.04	2,713,236,113.69	237,200,009.18	2,476,036,104.51	2,476,036,104.51
1872	1,840,615.01	428,218,101.20	2,618,126,103.87	150,974,892.18	2,467,151,211.69	2,467,151,211.69
1873	1,197,340.89	408,401,735.61	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1874	5,206,181.00	421,531,010.85	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1875	7,708,641.00	438,608,084.82	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1876	1,948,962.26	416,563,081.62	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1877	1,936,777.26	430,630,321.62	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1878	5,216,590.26	508,183,131.69	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1879	11,428,820.26	408,765,104.89	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1880	3,902,820.26	426,751,682.94	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1881	16,761,606.26	416,815,741.75	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1882	7,723,455.26	398,800,815.37	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1883	16,761,606.26	408,721,954.37	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1884	16,761,606.26	438,711,162.51	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1885	16,761,606.26	538,111,162.51	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1886	16,761,606.26	584,208,608.81	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1887	16,761,606.26	603,713,927.88	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1888	16,761,606.26	619,344,468.52	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1889	16,761,606.26	629,704,973.57	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1890	16,761,606.26	737,987,446.97	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1891	16,761,606.26	825,011,980.47	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76
1892	16,761,606.26	933,852,766.55	2,588,672,233.94	150,974,892.18	2,437,697,341.76	2,437,697,341.76

NOTE 1.—The annual interest charge is computed upon the amount of outstanding principal at the close of the fiscal year, and is exclusive of interest charge on Pacific Railroad bonds. Interest on the 4 per cent loan is computed at the regular rate from July 1, 1891, date of maturity, September 1, 1891, and at 2 per cent from that date to close of year.

NOTE 2.—The figures for July 1, 1879, were made up assuming pending funding operations to have been completed.

NOTE 3.—The temporary loan per act of July 11, 1862, is included in the 4 per cent loan from 1862 to 1863, inclusive, with the exception of the amount outstanding August 31, 1863, this being the date at which the public debt reached its highest point. The interest from 4 per cent to 6 per cent, and was redeemable on ten days' notice after thirty days; but being constantly changing, it has been considered more equitable to include the whole amount outstanding as bearing 4 per cent interest on an average for the year.

NOTE 4.—In the recent monthly statements of the public debt the interest accrued has been added to the principal, making the net debt larger in that amount than the amount herein stated for each year.

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TABLE H.—STATEMENT SHOWING THE CHANGES IN THE INTEREST-BEARING DEBT OF THE UNITED STATES DURING THE YEAR ENDED OCTOBER 31, 1891.

Title of loan.	Rate of interest.	Outstanding Nov. 1, 1890.	Increase during the year.	Decrease during the year.	Outstanding Nov. 1, 1891.
	<i>Per cent.</i>				
Funded loan of 1891.....	4½	\$63, 979, 850	.....	\$38, 615, 350	.....
Funded loan of 1891, continued.....	2	.....	.....	.....	\$25, 364, 500
Funded loan of 1907.....	4	568, 203, 850	*\$15, 150	8, 645, 850	559, 573, 150
Refunding certificates.....	4	99, 690	.....	10, 620	89, 070
Total.....	.....	632, 283, 390	15, 150	47, 271, 820	585, 026, 720

* See statement which follows, showing conversions of refunding certificates, for an explanation of the increase during the year in the interest-bearing debt.

Since November 1, 1890, refunding certificates issued in 1879, under the act of February 26, 1879, have been presented for conversion into 4 per cent bonds as follows:

Principal	\$10, 620. 00
Accrued interest thereon.....	5, 164. 00
Total.....	15, 784. 00

For which settlement was made as follows:

Four per cent bonds issued on account of principal.....	\$10, 620
Four per cent bonds issued on account of accrued interest.....	4, 530
Interest paid in cash.....	15, 150. 00
Total as above.....	634. 00
	15, 784. 00

The certificates still outstanding amount to \$89,070.

The reduction in the annual interest-charge, by reason of the changes during the year ended October 31, 1891, is as follows:

On bonds retired by purchase or redemption.....	\$2, 083, 524. 75
On bonds continued at 2 per cent.....	634, 112. 50
	2, 717, 637. 25
Deduct the interest on \$4,530 4 per cent bonds issued.....	181. 20
Net reduction	2, 717, 456. 05

In addition to the purchases and redemptions of 4 and 4½ per cent bonds there were redeemed \$95,850 United States bonds and seven-thirty notes upon which interest had ceased. The total net reduction of the bonded indebtedness of the United States during the year ended October 31, 1891, was, therefore, \$47,357,050.

REPORT OF THE SECRETARY OF THE TREASURY. 105

TABLE L.—STATEMENT SHOWING THE AMOUNTS OF MONEY IN THE UNITED STATES, IN THE TREASURY AND IN CIRCULATION, ON THE DATES SPECIFIED.

JULY 1, 1860.

[Population, 31,443,321; circulation per capita, \$13.85.]

	General stock coined or issued.	In Treasury.	Amount in circulation.
Specie.....	\$235,000,000	\$6,605,225	\$228,394,775
State-bank notes.....	207,102,477	.....	207,102,477
	442,102,477	6,605,225	428,497,252

JULY 1, 1861.

[Population, 32,064,000; circulation per capita, \$13.93.]

Specie.....	250,000,000	3,600,000	246,400,000
State-bank notes.....	202,005,767	.....	202,005,767
	452,005,767	3,600,000	448,405,767

JULY 1, 1862.

[Population, 32,704,000; circulation per capita, \$10.32.]

State-bank notes.....	183,792,079	.....	183,792,079
United States notes.....	96,620,000	23,754,335	72,865,665
Demand notes.....	53,040,000	.....	53,040,000
	333,452,079	23,754,335	309,697,744
Add: Specie in circulation on the Pacific coast.....		.....	25,000,000
			334,697,744

JULY 1, 1863.

[Population, 33,365,000; circulation per capita, \$17.84.]

Fractional currency.....	20,192,456	4,308,074	15,884,382
State-bank notes.....	238,677,218	.....	238,677,218
United States notes.....	387,646,589	75,165,171	312,481,418
Demand notes.....	3,351,020	.....	3,351,020
	649,867,283	79,473,245	570,394,038
Add: Specie in circulation on the Pacific coast.....		.....	25,000,000
			595,394,038

JULY 1, 1864.

[Population, 34,046,000; circulation per capita, \$19.67.]

Fractional currency.....	22,894,877	3,762,376	19,132,501
State-bank notes.....	179,157,717	.....	179,157,717
United States notes.....	447,300,203	32,184,213	415,115,990
National-bank notes.....	31,235,270	.....	31,235,270
	680,588,067	35,946,589	644,641,478
Add: Specie in circulation on the Pacific coast.....		.....	25,000,000
			669,641,478

TABLE I.—STATEMENT SHOWING THE AMOUNTS OF MONEY IN THE UNITED STATES, IN THE TREASURY AND IN CIRCULATION, ON THE DATES SPECIFIED—Continued.

JULY 1, 1865.

[Population, 34,748,000; circulation per capita, \$20.57.]

	General stock coined or issued.	In Treasury.	Amount in circulation.
Fractional currency.....	\$25,005,829	\$3,277,074	\$21,728,755
State-bank notes.....	142,919,638	.....	142,919,638
United States notes.....	431,066,428	53,149,696	378,916,732
National-bank notes.....	146,137,890	.....	146,137,890
	745,129,755	55,426,760	689,702,995
Add: Specie in circulation on the Pacific coast.....			25,000,000
			714,702,995

JULY 1, 1866.

[Population, 35,469,000; circulation per capita, \$18.99.]

State-bank notes.....	19,996,163	.....	19,996,163
Fractional currency.....	27,070,877	2,383,814	24,687,063
United States notes.....	400,780,306	72,988,001	327,792,305
National-bank notes.....	281,479,908	5,467,186	276,012,712
	729,327,254	80,839,010	648,488,244
Add: Specie in circulation on the Pacific coast.....			25,000,000
			673,488,244

JULY 1, 1867.

[Population, 36,211,000; circulation per capita, \$18.28.]

State-bank notes.....	4,484,112	.....	4,484,112
Fractional currency.....	28,307,524	2,001,230	26,306,294
United States notes.....	371,783,597	52,345,895	319,437,702
National-bank notes.....	298,625,379	11,861,418	286,763,961
	703,200,612	66,208,543	636,992,069
Add: Specie in circulation on the Pacific coast.....			25,000,000
			661,992,069

JULY 1, 1868.

[Population, 36,973,000; circulation per capita, \$18.30.]

State-bank notes.....	3,163,771	.....	3,163,771
Fractional currency.....	32,626,952	3,627,600	28,999,352
United States notes.....	356,000,000	27,426,325	328,573,675
National-bank notes.....	299,762,855	5,393,982	294,368,873
	691,553,578	36,449,917	655,103,661
Add: Specie in circulation on the Pacific coast.....			25,000,000
			680,103,661

JULY 1, 1869.

[Population, 37,756,000; circulation per capita, \$17.60.]

State-bank notes.....	2,558,874	.....	2,558,874
Fractional currency.....	22,114,637	1,672,398	20,442,239
United States notes.....	355,935,194	41,233,100	314,702,094
National-bank notes.....	299,742,475	7,992,791	291,749,684
	690,351,180	50,898,289	639,452,891
Add: Specie in circulation on the Pacific coast.....			25,000,000
			664,452,891

REPORT OF THE SECRETARY OF THE TREASURY. 107

TABLE I.—STATEMENT SHOWING THE AMOUNTS OF MONEY IN THE UNITED STATES, IN THE TREASURY AND IN CIRCULATION, ON THE DATES SPECIFIED—Continued.

JULY 1, 1870.

[Population, 38,588,371; circulation per capita, \$17.50.]

	General stock coined or issued.	In Treasury.	Amount in circulation.
State bank notes	\$2,222,793		\$2,222,793
Fractional currency	39,878,694	\$5,499,402	34,379,292
United States notes	356,000,000	31,027,823	324,972,177
National bank notes	299,766,984	11,118,908	288,648,076
	697,868,461	47,655,607	650,212,794
Add: Specie in circulation on the Pacific coast.....			25,000,000
			675,212,794

JULY 1, 1871.

[Population, 39,555,000; circulation per capita, \$18.10.]

State bank notes	1,968,056		1,968,056
Fractional currency	40,582,875	6,136,570	34,446,305
United States notes	356,000,000	12,931,030	343,068,970
National bank notes	318,261,241	6,855,569	311,405,672
	716,812,174	25,923,169	690,889,005
Add: Specie in circulation on the Pacific coast.....			25,000,000
			715,889,005

JULY 1, 1872.

[Population, 40,596,000; circulation per capita, \$18.19.]

State bank notes	1,700,935		1,700,935
Fractional currency	40,855,835	4,452,906	36,402,929
United States notes	357,500,000	11,331,320	346,168,680
National bank notes	337,664,795	8,627,790	329,037,005
	737,721,565	24,412,016	713,309,549
Add: Specie in circulation on the Pacific coast.....			25,000,000
			738,309,549

JULY 1, 1873.

[Population, 41,677,000; circulation per capita, \$18.04.]

State bank notes	1,379,184		1,379,184
Fractional currency	44,799,365	6,723,360	38,076,005
United States notes	356,000,000	7,535,855	348,464,145
National bank notes	347,267,081	8,304,586	338,962,475
	749,445,610	22,563,801	726,881,809
Add: Specie in circulation on the Pacific coast.....			25,000,000
			751,881,809

JULY 1, 1874.

[Population, 42,796,000; circulation per capita, \$18.13.]

State bank notes	1,162,453		1,162,453
Fractional currency	45,881,296	7,647,714	38,233,582
United States notes	382,000,000	10,578,548	371,421,452
National bank notes	351,981,032	11,715,488	340,265,544
	781,024,781	29,941,750	751,083,031
Add: Specie in circulation on the Pacific coast.....			25,000,000
			776,083,031

TABLE I.—STATEMENT SHOWING THE AMOUNTS OF MONEY IN THE UNITED STATES, IN THE TREASURY AND IN CIRCULATION, ON THE DATES SPECIFIED—Continued.

JULY 1, 1875.

[Population, 43,951,000; circulation per capita, \$17.16.]

	General stock coined or issued.	In Treasury.	Amount in circulation.
State-bank notes	\$964,497	.....	\$964,497
Fractional currency	42,129,424	\$4,224,854	37,904,570
United States notes	375,771,580	25,085,245	349,686,335
National-bank notes	354,408,008	13,861,463	340,546,545
	773,273,509	44,171,562	729,101,947
Add: Specie in circulation on the Pacific coast			25,000,000
			754,101,947

JULY 1, 1876.

[Population, 45,137,000; circulation per capita, \$16.12.]

State-bank notes	1,047,335	.....	1,047,335
Subsidiary silver	27,418,734	6,363,606	21,055,128
Fractional currency	34,446,595	1,507,750	32,938,845
United States notes	369,772,284	38,324,006	331,447,378
National-bank notes	332,998,336	10,877,634	316,120,702
	765,683,284	63,073,896	702,609,388
Add: Specie in circulation on the Pacific coast			25,000,000
			727,609,388

The amount of subsidiary silver in circulation, according to the records of the Department, was \$26,055,128, but for the sake of uniformity \$5,000,000 of this amount is deducted and stated as a part of the specie in circulation on the Pacific coast as heretofore.

JULY 1, 1877.

[Population, 46,353,000; circulation per capita, \$15.58.]

Subsidiary silver	40,837,500	2,952,653	37,884,853
Fractional currency	20,403,137	161,476	20,241,661
United States notes	359,764,332	21,864,988	337,899,344
National-bank notes	317,048,872	15,759,847	301,289,025
	738,053,847	40,738,964	697,314,883
Add: Specie in circulation on the Pacific coast			25,000,000
			722,314,883

JULY 1, 1878.

[Population, 47,598,000; circulation per capita, \$15.32.]

Standard silver dollars, including bullion in Treasury	16,269,079	15,059,828	1,209,251
Subsidiary silver	60,778,828	6,860,506	53,918,322
Silver certificates	1,462,600	1,455,320	7,080
Fractional currency	16,547,769	180,044	16,367,725
United States notes	346,681,016	25,775,121	320,905,895
National-bank notes	324,514,284	12,789,923	311,724,361
	766,253,576	62,120,942	704,132,634
Add: Specie in circulation on the Pacific coast			25,000,000
			729,132,634

REPORT OF THE SECRETARY OF THE TREASURY.

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TABLE I.—STATEMENT SHOWING THE AMOUNTS OF MONEY IN THE UNITED STATES, IN THE TREASURY AND IN CIRCULATION, ON THE DATES SPECIFIED—Continued.

JULY 1, 1879.

[Population, 48,866,000; circulation per capita, \$16.75.]

	General stock coined or issued.	In Treasury.	Amount in circulation.
Gold coin, including bullion in Treasury	\$245,741,837	\$135,236,475	\$110,505,362
Standard silver dollars, including bullion in Treasury ..	41,276,356	33,239,917	8,036,439
Subsidiary silver	70,249,085	8,903,401	61,346,584
Gold certificates	15,413,700	133,880	15,279,820
Silver certificates	2,466,650	2,052,470	414,180
United States notes	346,681,016	45,036,904	301,644,112
National-bank notes	329,691,697	8,286,701	321,404,996
	1,051,521,541	232,889,748	818,631,793

JULY 1, 1880.

[Population, 50,155,783; circulation per capita, \$19.41.]

Gold coin, including bullion in Treasury	\$351,841,206	\$126,145,427	\$225,695,779
Standard silver dollars, including bullion in Treasury ..	69,660,408	49,549,851	20,110,557
Subsidiary silver	72,862,270	24,350,482	48,511,788
Gold certificates	8,004,660	40,700	7,963,960
Silver certificates	12,374,270	6,584,701	5,789,569
United States notes	346,681,016	18,785,559	327,895,457
National-bank notes	344,505,427	7,090,249	337,415,178
	1,205,929,197	232,546,969	973,382,228

JULY 1, 1881.

[Population, 51,316,000; circulation per capita, \$21.71.]

Gold coin, including bullion in Treasury	\$478,484,538	\$163,171,661	\$315,312,877
Standard silver dollars, including bullion in Treasury ..	95,297,083	65,054,671	29,342,412
Subsidiary silver	74,087,061	27,247,697	46,839,364
Gold certificates	5,782,920	23,400	5,759,520
Silver certificates	51,166,530	12,055,801	39,110,729
United States notes	346,681,016	18,554,092	328,126,924
National-bank notes	355,042,675	5,296,382	349,746,293
	1,406,541,823	292,303,704	1,114,238,119

JULY 1, 1882.

[Population, 52,495,000; circulation per capita, \$22.37.]

Gold coin, including bullion in Treasury	\$505,757,715	\$148,506,390	\$358,251,325
Standard silver dollars, including bullion in Treasury ..	122,788,544	90,384,724	32,403,820
Subsidiary silver	74,428,580	28,048,631	46,379,949
Gold certificates	5,037,120	8,100	5,029,020
Silver certificates	66,096,710	11,590,620	54,506,090
United States notes	346,681,016	21,425,589	325,255,427
National-bank notes	358,742,034	6,277,246	352,464,788
	1,480,531,719	306,241,300	1,174,290,419

TABLE I.—STATEMENTS SHOWING THE AMOUNTS OF MONEY IN THE UNITED STATES, IN THE TREASURY AND IN CIRCULATION, ON THE DATES SPECIFIED—Continued.

JULY 1, 1883.

[Population, 53,693,000; circulation per capita, \$22.91.]

	General stock coined or issued.	In Treasury.	Amount in circulation.
Gold coin, including bullion in Treasury.....	\$542,732,063	\$198,078,568	\$344,653,495
Standard silver dollars, including bullion in Treasury.....	152,047,685	116,396,235	35,651,450
Subsidiary silver.....	74,960,300	28,486,001	46,474,299
Gold certificates.....	82,378,640	22,571,270	59,807,370
Silver certificates.....	88,616,831	15,996,145	72,620,686
United States notes.....	346,681,016	23,438,839	323,242,177
National-bank notes.....	356,073,281	8,217,062	347,856,219
	1,643,489,816	413,184,120	1,230,305,696

JULY 1, 1884.

[Population, 54,911,000; circulation per capita, \$22.65.]

Gold coin, including bullion in Treasury.....	\$545,500,797	\$204,876,594	\$340,624,203
Standard silver dollars, including bullion in Treasury.....	180,396,614	139,610,414	40,690,200
Subsidiary silver.....	75,261,528	29,600,720	45,660,808
Gold certificates.....	98,392,660	27,246,020	71,146,640
Silver certificates.....	119,811,691	23,384,680	96,427,011
United States notes.....	346,681,016	27,993,802	318,687,214
National-bank notes.....	339,499,883	8,809,990	330,689,893
	1,705,454,189	461,528,220	1,243,925,969

JULY 1, 1885.

[Population, 56,148,000; circulation per capita, \$23.02.]

Gold coin, including bullion in Treasury.....	\$588,697,036	\$247,028,625	\$341,668,411
Standard silver dollars, including bullion in Treasury.....	208,538,967	169,451,998	39,086,969
Subsidiary silver.....	74,339,820	31,236,899	43,102,921
Gold certificates.....	140,323,140	13,593,410	126,729,730
Silver certificates.....	189,901,646	38,370,700	151,530,946
United States notes.....	346,681,016	15,462,379	331,218,637
National-bank notes.....	318,576,711	9,945,710	308,631,001
	1,817,658,336	525,089,721	1,292,568,615

JULY 1, 1886.

[Population, 57,404,000; circulation per capita, \$21.82.]

Gold coin, including bullion in Treasury.....	\$590,774,461	\$232,554,886	\$358,219,575
Standard silver dollars, including bullion in Treasury.....	237,191,906	184,523,283	52,668,623
Subsidiary silver.....	75,060,937	28,880,947	46,179,990
Gold certificates.....	131,174,245	55,129,870	76,044,375
Silver certificates.....	115,977,675	27,861,450	88,116,225
United States notes.....	346,681,016	22,868,317	323,812,699
National-bank notes.....	311,699,454	4,034,416	307,665,038
	1,808,559,694	555,850,169	1,252,709,525

REPORT OF THE SECRETARY OF THE TREASURY.

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TABLE I.—STATEMENT SHOWING THE AMOUNTS OF MONEY IN THE UNITED STATES, IN THE TREASURY AND IN CIRCULATION, ON THE DATES SPECIFIED—Continued.

JULY 1, 1887.

[Population, 58,680,000; circulation per capita, \$23.45.]

	General stock coined or issued.	In Treasury.	Amount in circulation.
Gold coin, including bullion in Treasury	\$654,520,385	\$277,979,654	\$376,540,681
Standard silver dollars, including bullion in Treasury ..	277,445,767	221,897,046	55,548,721
Subsidiary silver	75,547,799	26,963,934	48,583,865
Gold certificates	121,486,817	30,261,380	91,225,437
Silver certificates	145,543,150	3,425,133	142,118,017
United States notes	346,681,016	20,013,797	326,667,219
National-bank notes	279,217,788	2,362,585	276,855,203
	1,900,442,672	582,903,529	1,317,539,143

JULY 1, 1888.

[Population, 59,974,000; circulation per capita, \$22.88.]

Gold coin, including bullion in Treasury	\$705,818,855	\$314,704,822	\$391,114,033
Standard silver dollars, including bullion in Treasury ..	319,166,459	254,639,063	55,527,396
Subsidiary silver	76,406,376	26,044,062	50,362,314
Gold certificates	142,023,150	20,928,500	121,094,650
Silver certificates	229,491,772	28,732,115	200,759,657
United States notes	346,681,016	38,680,976	308,000,040
National-bank notes	252,368,321	7,055,541	245,312,780
	2,062,955,949	690,785,079	1,372,170,870

JULY 1, 1889.

[Population, 61,289,000; circulation per capita, \$22.52.]

Gold coin, including bullion in Treasury	\$680,063,505	\$303,581,937	\$376,481,568
Standard silver dollars, including bullion in Treasury ..	343,947,093	289,489,794	54,457,299
Subsidiary silver	76,601,836	25,124,072	51,477,764
Gold certificates	154,048,552	36,018,323	117,130,229
Silver certificates	262,629,746	5,474,181	257,155,565
United States notes	346,681,016	30,241,825	316,439,191
National-bank notes	211,378,963	4,158,330	207,220,633
	2,075,350,711	694,689,062	1,380,661,649

JULY 1, 1890.

[Population, 62,622,250; circulation per capita, \$22.82.]

Gold coin, including bullion in Treasury	\$695,563,029	\$321,304,106	\$374,258,923
Standard silver dollars, including bullion in Treasury ..	380,083,304	323,804,555	56,278,749
Subsidiary silver	76,825,305	23,792,718	53,032,587
Gold certificates	157,562,979	26,732,120	130,830,859
Silver certificates	301,539,751	3,983,513	297,556,238
United States notes	346,681,016	11,092,039	334,688,977
National-bank notes	185,970,775	4,365,838	181,604,937
	2,144,226,159	714,074,889	1,429,251,270

112 REPORT OF THE SECRETARY OF THE TREASURY.

TABLE I.—STATEMENT SHOWING THE AMOUNTS OF MONEY IN THE UNITED STATES, IN THE TREASURY AND IN CIRCULATION, ON THE DATES SPECIFIED—Continued.

JULY 1, 1891.

[Population, 63,975,000; circulation per capita, \$23.41.]

	General stock coined or issued.	In Treasury.	Amount in circulation.
Gold coin, including bullion in Treasury	\$646,582,852	\$239,263,689	\$407,319,163
Standard silver dollars, including bullion in Treasury	438,753,502	379,927,323	58,826,179
Subsidiary silver	77,848,709	19,629,480	58,219,229
Gold certificates	152,486,429	32,423,366	120,063,063
Silver certificates	314,713,185	7,479,219	307,233,966
Treasury notes, Act July 14, 1890	50,228,417	9,879,713	40,348,704
United States notes	346,681,016	3,473,656	343,207,360
National-bank notes	167,927,974	5,706,928	162,221,046
	2,195,224,075	697,783,368	1,497,440,707

RECAPITULATION.

Year.	Amount of money in United States.	Amount in cir- culation.	Population.	Money per capita.	Circulation per capita.
1860	\$442,102,477	\$435,407,252	31,443,321	\$14.06	\$13.85
1861	452,005,767	448,405,767	32,064,000	14.09	13.98
1862	358,452,079	334,697,744	32,704,000	10.96	10.23
1863	674,897,283	595,394,038	33,365,000	20.23	17.84
1864	705,588,067	660,641,478	34,046,000	20.72	19.67
1865	770,129,755	714,702,095	34,748,000	22.16	20.37
1866	754,327,254	673,488,244	35,469,000	21.27	18.99
1867	728,200,612	661,992,060	36,211,000	20.11	18.28
1868	716,553,578	689,103,661	36,973,000	19.38	18.39
1869	715,351,180	664,452,891	37,756,000	18.95	17.60
1870	722,868,461	675,212,794	38,588,371	18.73	17.50
1871	741,812,174	715,889,005	39,555,000	18.75	18.10
1872	762,721,565	738,309,549	40,596,000	18.70	18.19
1873	774,445,610	751,881,809	41,677,000	18.58	18.04
1874	806,024,781	776,083,031	42,796,000	18.83	18.13
1875	798,273,509	754,101,947	43,951,000	18.16	17.16
1876	790,683,284	727,609,388	45,137,000	17.52	16.12
1877	763,053,847	722,814,883	46,353,000	16.46	15.58
1878	791,253,576	729,132,634	47,598,000	16.62	15.32
1879	1,051,521,541	818,631,793	48,866,000	21.52	16.75
1880	1,205,929,197	973,382,228	50,155,783	24.04	19.41
1881	1,406,541,823	1,114,238,119	51,316,000	27.41	21.71
1882	1,480,531,719	1,174,290,419	52,495,000	28.20	22.47
1883	1,643,489,816	1,230,305,696	53,693,000	30.60	22.91
1884	1,705,454,189	1,243,925,969	54,911,000	31.06	22.65
1885	1,817,658,336	1,292,568,615	56,148,000	32.37	23.02
1886	1,808,559,694	1,252,700,525	57,404,000	31.50	21.82
1887	1,900,442,672	1,317,539,143	58,680,000	32.39	22.45
1888	2,062,955,949	1,372,170,870	59,974,000	34.39	22.68
1889	2,075,350,711	1,380,361,649	61,289,000	33.86	22.52
1890	2,144,226,159	1,429,251,270	62,622,250	34.24	22.82
1891	2,195,224,075	1,497,440,707	63,975,000	34.31	23.41

NOTE.—The difference between the amount of money in the country and the amount in circulation represents the money in the Treasury.

	2d session 47th Congress, Fiscal year 1884.	1st session 48th Congress, Fiscal year 1885.	2d session 48th Congress, Fiscal year 1886.	1st session 49th Congress, Fiscal year 1887.	2d session 49th Congress, Fiscal year 1888.	1st session 50th Congress, Fiscal year 1889.	2d session 50th Congress, Fiscal year 1890.	1st session 51st Congress, Fiscal year 1891.	2d session 51st Congress, Fiscal year 1892.
To supply deficiencies for the services of the various branches of the Government.	\$2,832,680.04	\$4,385,836.10	\$43,392,717.30	\$13,572,892.01	\$137,000.00	\$21,190,995.61	\$14,230,170.71	\$34,137,737.96	\$38,516,227.87
For legislative, executive, and judicial expenses of the Government.	20,763,842.55	21,550,001.05	21,495,600.70	20,898,781.46	20,772,720.67	20,924,492.42	20,805,219.93	21,073,137.47	22,027,674.75
For sundry civil expenses of the Government.	23,713,404.22	22,346,749.74	25,061,004.12	22,656,658.49	22,309,840.00	26,316,520.85	25,527,641.65	29,700,054.47	35,459,163.99
For support of the Army.	24,031,250.00	24,454,450.00	24,014,052.50	22,753,057.21	23,724,718.09	24,474,710.97	24,316,615.73	24,206,471.79	24,613,529.19
For the naval service.	15,954,247.23	18,931,856.12	21,280,766.93	16,480,556.72	25,766,847.70	19,938,291.05	21,675,374.98	23,136,035.52	31,541,945.78
For the Indian service.	5,388,655.91	6,903,151.26	6,773,328.56	8,561,292.84	5,234,397.66	5,461,330.31	8,077,453.39	7,256,768.27	16,278,492.48
For rivers and harbors.	14,948,300.00	14,948,300.00	14,948,300.00	14,464,900.00	.....	22,307,616.00	.....	25,130,205.00	2,951,200.00
For forts and fortifications.	670,000.00	700,000.00	725,000.00	56,876.90	.....	3,972,000.00	1,223,594.00	4,222,933.00	3,774,800.00
For support of Military Academy.	318,657.50	314,563.50	309,002.14	297,805.00	419,830.93	315,043.81	902,706.09	433,296.11	402,070.39
For service of Post-Office Department.	Indefinite.	Indefinite.	Indefinite.	Indefinite.	Indefinite.	Indefinite.	Indefinite.	Indefinite.	Indefinite.
For invalid and other pensions, including deaf-blind.	\$80,575,000.00	20,810,000.00	80,000,000.00	76,075,200.00	83,152,500.00	81,758,700.00	81,758,700.00	98,457,461.00	133,214,715.00
For consular and diplomatic service.	1,296,255.00	1,225,140.00	1,242,925.00	1,364,065.00	1,429,942.44	1,428,465.00	1,980,025.00	1,710,725.96	1,656,925.00
For services of Agricultural Department.	405,640.00	480,190.00	580,700.00	654,715.00	1,028,730.00	1,715,836.14	1,069,770.00	1,796,502.85	3,024,153.50
For expenses of the District of Columbia.	3,505,494.97	3,594,255.54	3,622,632.20	3,721,950.89	4,284,660.00	5,056,674.98	5,652,409.91	5,702,204.75	5,597,125.17
For miscellaneous.	1,806,432.75	7,800,093.86	2,208,383.15	10,184,970.80	4,094,635.33	10,129,801.65	10,186,688.81	10,070,840.80	2,721,283.24
Totals.	137,911,566.17	137,451,397.77	170,003,113.00	209,459,382.91	192,035,801.13	245,020,172.89	218,115,439.80	287,722,488.96	323,763,079.36

* Not including \$6,150,061.98 appropriated for the naval service for six months ending June 30, 1885.

† For six months ending December 31, 1884.

‡ Includes \$9,150,061.98 for six months ending June 30, 1885.

§ And reappropriation of unexpended balances, estimated at \$38,000,000.

|| And reappropriation of unexpended balances, estimated at \$65,000,000.

TABLE K.—STATEMENT OF THE NET RECEIPTS (BY WARRANTS) DURING THE FISCAL YEAR ENDED JUNE 30, 1891.

<i>Customs:</i>			
Quarter ended September 30, 1890.....	\$87,978,907.00		
Quarter ended December 31, 1890.....	55,444,576.81		
Quarter ended March 31, 1891.....	57,736,297.28		
Quarter ended June 30, 1891.....	38,877,424.05		
			\$219,582,205.23
<i>Internal revenue:</i>			
Quarter ended September 30, 1890.....	37,816,314.14		
Quarter ended December 31, 1890.....	37,818,198.28		
Quarter ended March 31, 1891.....	32,838,956.83		
Quarter ended June 30, 1891.....	37,132,780.19		
			145,606,249.44
<i>Sales of public lands:</i>			
Quarter ended September 30, 1890.....	1,023,621.48		
Quarter ended December 31, 1890.....	1,155,567.91		
Quarter ended March 31, 1891.....	864,746.99		
Quarter ended June 30, 1891.....	985,596.03		
			4,029,532.41
<i>Tax on circulation of national banks:</i>			
Quarter ended September 30, 1890.....	615,178.79		
Quarter ended December 31, 1890.....	7,075.72		
Quarter ended March 31, 1891.....	607,192.59		
Quarter ended June 30, 1891.....	6,595.50		
			1,236,042.60
<i>Repayment of interest by Pacific railroads:</i>			
Quarter ended September 30, 1890.....	183,805.14		
Quarter ended December 31, 1890.....	226,624.99		
Quarter ended March 31, 1891.....	283,901.00		
Quarter ended June 30, 1891.....	179,572.21		
			833,904.04
<i>Customs fees, fines, penalties, and forfeitures:</i>			
Quarter ended September 30, 1890.....	236,105.09		
Quarter ended December 31, 1890.....	296,070.07		
Quarter ended March 31, 1891.....	190,354.06		
Quarter ended June 30, 1891.....	243,592.09		
			966,121.31
<i>Fees—consular, letters patent, and lands:</i>			
Quarter ended September 30, 1890.....	898,581.97		
Quarter ended December 31, 1890.....	744,210.96		
Quarter ended March 31, 1891.....	654,928.60		
Quarter ended June 30, 1891.....	732,060.21		
			3,019,781.84
<i>Proceeds of sales of Government property:</i>			
Quarter ended September 30, 1890.....	53,247.71		
Quarter ended December 31, 1890.....	80,250.47		
Quarter ended March 31, 1891.....	50,160.70		
Quarter ended June 30, 1891.....	95,711.17		
			269,370.05
<i>Profits on coinage:</i>			
Quarter ended September 30, 1890.....	1,102,112.98		
Quarter ended December 31, 1890.....	1,795,470.17		
Quarter ended March 31, 1891.....	1,727,901.33		
Quarter ended June 30, 1891.....	3,076,507.34		
			7,701,991.82
<i>Revenues of District of Columbia:</i>			
Quarter ended September 30, 1890.....	838,950.07		
Quarter ended December 31, 1890.....	1,241,028.22		
Quarter ended March 31, 1891.....	181,205.60		
Quarter ended June 30, 1891.....	1,097,713.85		
			3,358,897.74
<i>Miscellaneous:</i>			
Quarter ended September 30, 1890.....	1,619,009.78		
Quarter ended December 31, 1890.....	1,144,946.42		
Quarter ended March 31, 1891.....	1,158,852.55		
Quarter ended June 30, 1891.....	2,590,529.57		
			6,513,338.32
Total ordinary receipts, exclusive of loans.....			362,612,447.81
Receipts from loans, certificates, and notes.....			873,208,857.75
Total receipts.....			785,821,305.06
Balance in Treasury June 30, 1890.....			691,527,403.76
Grand total.....			1,477,348,708.82

REPORT OF THE SECRETARY OF THE TREASURY. 115

TABLE L.—STATEMENT OF THE NET DISBURSEMENTS (BY WARRANTS) DURING THE FISCAL YEAR ENDED JUNE 30, 1891.

CIVIL.	
Congress.....	\$7,103,469.80
Executive.....	12,526,569.07
Judiciary.....	5,808,080.77
Government in the Territories.....	418,181.53
Subtreasuries.....	400,260.09
Public land offices.....	676,306.71
Mints and assay offices.....	211,077.27
Total civil.....	\$27,143,225.17
FOREIGN INTERCOURSE.	
Diplomatic salaries.....	556,343.97
Consular salaries.....	428,896.40
Contingent expenses of foreign missions.....	112,533.98
Contingencies of consulates.....	218,067.12
Special indemnity.....	28,017.54
Relief, protection, and rescuing shipwrecked American seamen.....	36,495.38
International Union of American Republics.....	31,341.09
Continental Railway Commission.....	58,004.00
International American Conference.....	57,694.41
Emergencies arising in the diplomatic and consular service.....	42,081.73
Relief of owners and crews of American whaling vessels.....	125,000.00
Miscellaneous items.....	134,234.74
Total foreign intercourse.....	2,028,715.24
MISCELLANEOUS.	
Mint establishment.....	1,181,276.08
Life-Saving Service.....	998,396.46
Revenue-Cutter Service.....	886,166.26
Steamboat Inspection Service.....	278,714.20
Engraving and printing.....	1,081,052.65
Coast and Geodetic Survey.....	479,855.14
Light-House Establishment.....	3,007,883.33
Marine-Hospital Establishment.....	520,212.07
Custom-houses, court-houses, post-offices, etc.....	4,811,822.18
Pay of assistant custodians and janitors for public buildings.....	512,387.95
Fuel, lights, and water for public buildings.....	629,943.24
Furniture and heating apparatus for public buildings.....	370,957.74
Vaults, safes, locks, and plans for public buildings.....	108,596.84
Collecting revenue from customs:	
For the year 1891.....	\$0,038,457.98
For prior years.....	273,790.73
Detection and prevention of frauds upon the customs revenue.....	15,005.51
Refunding excess of deposits, etc.....	6,980,244.22
Debitures and drawbacks under customs laws.....	7,011,071.02
Compensation in lieu of moiety.....	4,925,439.50
Expenses of regulating immigration.....	12,900.14
Salaries, shipping service.....	170,597.88
Services to American vessels.....	59,543.48
Enforcement of contract-labor law.....	25,078.16
Chinese exclusion act.....	61,500.00
Revenue vessels.....	48,949.02
Interstate Commerce Commission.....	131,618.00
World's Columbian Exposition.....	222,631.10
Expenses seal fisheries in Alaska.....	169,378.31
Assessing and collecting internal revenue.....	22,117.87
Paper for internal-revenue stamps.....	4,003,475.65
Redemption of internal-revenue stamps.....	42,498.38
Punishing violations of internal-revenue laws.....	22,726.35
Refunds, reliefs, etc., under internal-revenue laws.....	32,659.01
Allowance or drawback under internal-revenue laws.....	106,043.23
Rebate of tax on tobacco.....	49,671.85
Payment of judgments, Court of Claims.....	770,082.39
Preventing the spread of epidemic diseases.....	368,128.63
Expenses of Treasury notes.....	30,308.40
Distinctive paper for United States securities.....	218,062.60
Suppressing counterfeiting and other crimes.....	49,685.71
Transportation and recoining of coin.....	60,132.23
Propagation, etc., food fishes.....	25,204.59
Expenses under Smithsonian Institution.....	850,668.92
National Zoological Park.....	108,950.47
Contingent expenses, independent treasury.....	69,700.00
Sinking funds, Pacific railroads.....	74,493.59
Mail transportation, Pacific railroads.....	2,318,289.70
Refund of direct tax.....	1,343,881.31
District of Columbia:	
Expenses, 50 per cent. payable by the United States.....	11,521,496.62
Water department, payable from the water fund.....	\$5,336,279.95
Special trust funds.....	217,899.91
	81,830.75
	5,635,510.61

TABLE L.—STATEMENT OF THE NET DISBURSEMENTS (BY WARRANTS) DURING THE FISCAL YEAR ENDED JUNE 30, 1891—Continued.

MISCELLANEOUS—Continued.

Buildings and grounds in Washington under Chief Engineer.....	\$180,662.49
Building for State, War, and Navy Departments.....	25,500.00
Fuel, lights, etc., State, War, and Navy Department building.....	49,968.00
Care, maintenance, etc., of Washington Monument.....	14,115.76
Statue of Gen. Lafayette.....	26,490.00
Support and treatment of destitute patients.....	18,510.76
Water supply, Washington, D. C.....	111,709.28
Department of Agriculture.....	1,797,147.16
Debt in the postal revenues.....	4,741,772.08
Capitol building and grounds.....	133,507.73
Building for Library of Congress.....	985,000.00
Interior Department building.....	6,386.32
Government Hospital for the Insane.....	278,594.68
Columbia Institution for the Deaf and Dumb.....	50,031.99
Freedmen's Hospital and Asylum.....	49,985.33
Howard University.....	25,800.00
National Museum.....	182,792.48
Colleges for agriculture and the mechanic arts.....	1,081,000.00
Surveying public and private lands.....	217,022.92
Contingent expenses land offices.....	205,788.01
Geological Survey.....	645,033.81
Expenses Eleventh Census.....	5,942,977.13
Hot Springs reservation, Arkansas.....	60,243.62
Deposits by individuals for surveying public lands.....	94,896.84
Repayment for lands erroneously sold.....	49,354.20
Swamp lands and swamp-land indemnity.....	41,124.14
Depredations on public timber.....	101,264.57
Protecting public lands.....	125,114.33
Five per cent. funds to States.....	514,297.14
Photolithographing for the Patent Office.....	105,292.67
Official Gazette, Patent Office.....	64,992.40
Payment of French spoliation claims.....	1,083,240.42
Miscellaneous items.....	185,047.84
Total miscellaneous.....	\$80,875,527.0

INTERIOR DEPARTMENT.

Indians.....	8,527,469.01
Pensions.....	124,415,951.40
Total Interior Department.....	132,943,420.4

MILITARY ESTABLISHMENT.

Pay Department.....	17,289,626.98
Pay Department, bounty and miscellaneous.....	1,316,794.71
Commissary Department.....	1,685,577.24
Quartermaster's Department.....	9,002,882.33
Medical Department.....	807,406.49
Ordnance Department.....	2,239,741.64
Armories and arsenals.....	635,876.36
Military Academy.....	236,399.14
Improving rivers and harbors.....	12,260,627.23
Damages by improvement of Fox and Wisconsin rivers.....	158,293.87
Fortifications.....	676,465.81
Construction of military posts, roads, etc.....	687,028.42
National cemeteries, roads, etc.....	281,718.17
Expenses of recruiting.....	104,841.48
Contingencies of the Army.....	16,580.57
Signal Service.....	753,284.70
Expenses of military convicts.....	5,889.36
Publication of official records of the war of the rebellion.....	199,560.38
Support of National Homes for Disabled Volunteer Soldiers.....	3,082,411.37
Support of Soldiers' Home.....	308,458.44
Soldiers' Home permanent fund and interest account.....	278,160.93
Support of military prison, Fort Leavenworth, Kans.....	76,836.45
Yellowstone National Park.....	49,990.90
Claims, reimbursements, reliefs, etc.....	607,977.05
Miscellaneous items.....	23,025.99
Total military establishment.....	48,720,065.0

TABLE L.—STATEMENT OF THE NET DISBURSEMENTS (BY WARRANTS) DURING THE FISCAL YEAR ENDED JUNE 30, 1891—Continued.

NAVAL ESTABLISHMENT.	
Pay, etc., of the Navy	\$7, 879, 200.05
Contingent Navy	56, 516.66
Marine Corps	930, 886.23
Naval Academy	274, 544.76
Navigation	217, 476.73
Ordnance	410, 443.19
Equipment	1, 158, 810.03
Yards and Docks	1, 208, 500.88
Medicine and Surgery	230, 563.15
Provisions and Clothing	1, 461, 192.47
Construction and Repair	1, 283, 438.85
Steam Engineering	670, 260.57
Increase of the Navy	10, 609, 197.15
Mileage under Graham decision	72, 060.45
Commissions on new navy yards	14, 515.73
Relief of sufferers by wreck of United States steamers	122, 892.77
Miscellaneous items and reliefs	182, 315.43
Total	26, 782, 805.15
Less repayments on account of advances	668, 908.69
Total naval establishment	\$26, 113, 896.46
Interest on the public debt	37, 547, 135.37
Premium on purchase of bonds	10, 401, 220.61
Total net ordinary expenditures	365, 773, 905.35
Redemption of the public debt	365, 352, 470.87
Total expenditures	731, 126, 376.22
Balance in Treasury June 30, 1891	726, 222, 332.60
Grand total	1, 457, 348, 708.82

TABLE M.—STATEMENT OF THE NET RECEIPTS AND DISBURSEMENTS (BY WARRANTS) FOR THE QUARTER ENDED SEPTEMBER 30, 1891.

RECEIPTS.

Customs	\$45, 246, 059.75
Internal revenue	39, 083, 447.18
Sales of public lands	908, 768.41
Tax on national banks	604, 410.83
Repayment of interest by Pacific railroads	143, 051.08
Customs, fees, fines, penalties, and forfeitures	101, 004.19
Fees—consular, letters patent, and lands	694, 290.19
Proceeds of sales of Government property	84, 163.19
Fruits on coinage, etc.	284, 126.96
Miscellaneous	4, 029, 692.87
Total net ordinary receipts	91, 245, 923.65
Issues of public debt in excess of redemption	24, 245, 187.00
Balance in the Treasury June 30, 1891	726, 222, 332.60
Total	841, 713, 443.25

DISBURSEMENTS.

Customs	5, 187, 008.91
Internal revenue	1, 577, 562.42
Diplomatic	366, 239.58
Treasury	14, 884, 636.53
Judiciary	1, 220, 025.07
Interior civil	3, 405, 725.30
Total civil and miscellaneous	26, 441, 197.81
Indians	3, 360, 427.62
Pensions	25, 440, 325.71
Military establishment	13, 337, 154.95
Naval establishment	7, 562, 034.04
Interest on the public debt	3, 705, 594.70
Total net ordinary expenditures	79, 846, 674.89
Redemption of public debt in excess of issues	36, 999, 527.00
Balance in the Treasury September 30, 1891	725, 767, 241.36
Total	841, 713, 443.25

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TABLE N.—STATEMENT OF RECEIPTS OF THE UNITED STATES FROM MARCH 4, 1789,
30) FROM

Year.	Balance in the Treasury at commencement of year.	Customs.	Internal revenue.	Direct tax.	Public lands.	Miscellaneous.
1791		\$4,399,473.09				\$10,478.10
1792	\$973,905.75	3,443,070.35	\$208,942.81			9,918.65
1793	783,444.51	4,255,306.56	337,705.70			21,410.68
1794	753,661.69	4,801,065.28	274,089.62			53,277.97
1795	1,151,914.17	5,588,561.20	337,755.36			28,317.97
1796	519,442.61	6,567,287.94	475,399.00		84,836.13	1,169,415.96
1797	888,995.42	7,549,649.65	575,491.45		83,540.60	399,139.29
1798	1,021,899.04	7,106,061.93	644,357.95		11,963.11	58,192.81
1799	617,451.43	6,610,449.31	779,136.44			86,187.56
1800	2,161,807.77	9,080,932.73	809,396.55	\$734,233.97	443.75	132,712.10
1801	2,623,311.99	10,750,778.93	1,048,033.43	534,343.38	167,726.06	845,649.15
1802	3,295,391.00	12,438,235.74	621,898.89	206,565.44	188,625.02	1,500,505.86
1803	5,020,697.64	10,479,417.61	215,179.69	71,879.20	165,675.09	131,945.44
1804	4,825,811.80	11,008,565.33	50,941.29	50,198.44	487,526.79	139,075.53
1805	4,037,005.26	12,936,487.04	21,747.15	21,882.91	540,193.80	40,382.30
1806	3,990,388.99	14,667,698.17	20,101.45	55,763.86	765,245.78	51,121.86
1807	4,538,128.80	16,845,521.61	13,051.40	84,732.56	466,163.27	38,550.42
1808	9,643,850.07	16,363,550.58	8,190.23	19,159.21	647,939.06	21,822.85
1809	9,941,809.96	7,256,500.62	4,034.29	7,517.31	442,952.33	62,162.57
1810	3,848,050.78	8,583,309.31	7,430.63	12,448.68	696,548.82	84,476.84
1811	2,670,276.57	13,313,222.73	2,295.95	7,666.66	1,040,237.53	59,211.22
1812	2,502,305.80	8,958,777.53	4,903.06	869.22	710,437.78	126,165.17
1813	3,862,217.41	13,224,623.25	4,755.04	5,805.52	835,655.14	271,571.00
1814	5,190,542.00	5,998,772.08	1,662,984.82	2,219,497.36	1,135,971.09	164,398.81
1815	1,727,484.63	7,282,942.22	4,678,069.07	2,162,673.41	1,287,959.38	285,282.84
1816	13,106,592.88	36,306,874.88	5,124,708.31	4,253,635.09	1,717,985.03	273,782.35
1817	22,033,519.19	26,283,148.19	2,678,100.77	1,824,187.04	1,991,226.06	109,761.08
1818	14,989,465.48	17,176,385.00	955,270.20	264,233.36	2,606,564.77	87,617.71
1819	1,478,526.74	20,283,608.76	229,503.63	83,650.78	3,274,432.78	57,098.42
1820	2,070,992.38	15,005,612.15	106,200.53	31,586.82	1,635,871.61	61,338.44
1821	1,198,461.21	13,004,447.15	69,027.63	29,349.05	1,212,966.46	152,589.43
1822	1,681,592.34	17,589,761.94	67,625.71	20,961.56	1,803,581.54	452,957.19
1823	4,237,427.55	10,088,433.44	34,242.17	10,337.71	916,523.10	141,129.84
1824	9,463,922.81	17,878,325.71	34,663.37	6,201.96	944,418.15	127,603.60
1825	1,946,597.13	20,098,713.45	25,771.35	2,330.85	1,216,090.56	130,451.81
1826	5,201,650.43	23,341,331.77	21,589.93	6,638.70	1,393,785.09	94,588.66
1827	6,358,686.18	19,712,283.29	19,885.68	2,626.90	1,495,845.26	1,315,722.83
1828	6,608,286.10	23,205,523.64	17,451.54	2,218.81	1,018,398.75	65,126.49
1829	5,972,432.81	22,681,965.91	14,502.74	11,395.05	1,517,176.13	113,648.55
1830	5,755,704.79	21,922,391.39	12,160.62	16,980.59	3,329,356.14	73,227.77
1831	6,014,539.75	24,224,441.77	6,933.51	10,506.01	3,210,815.48	584,134.05
1832	4,502,914.45	28,465,237.24	11,630.65	6,791.13	2,623,381.03	270,410.61
1833	2,011,777.55	29,032,508.91	2,759.00	394.12	3,907,682.55	470,096.67
1834	11,702,905.31	16,214,957.15	4,196.09	19.80	4,857,600.69	480,812.32
1835	8,892,858.42	19,391,310.59	10,459.48	4,263.33	14,757,600.75	759,972.13
1836	26,749,803.96	23,409,940.53	870.00	728.79	24,877,179.86	2,245,902.23
1837	46,708,436.00	11,169,200.39	5,493.84	1,687.70	6,776,236.52	7,001,444.59
1838	37,327,252.69	16,158,800.36	2,467.27		3,730,945.66	6,410,348.45
1839	36,891,196.94	23,137,924.81	2,553.32	755.22	7,361,576.40	979,939.86
1840	33,157,503.68	13,499,502.17	1,682.25		8,411,818.63	2,567,112.28
1841	29,968,163.46	14,487,216.74	3,261.36		1,365,627.42	1,004,054.75
1842	28,685,111.08	18,187,908.76	495.00		1,335,797.52	451,995.97
1843	30,521,979.44	7,046,843.91	103.25		898,158.18	285,895.92
1844	39,186,284.74	26,183,570.94	1,777.34		2,059,939.80	1,075,419.70
1845	36,742,829.62	27,528,112.70	3,517.12		2,077,022.30	361,453.68
1846	36,194,274.81	26,712,667.87	2,897.26		2,604,452.48	289,950.13
1847	38,201,959.65	23,747,884.66	375.00		2,498,355.20	220,808.30
1848	32,079,276.43	31,757,070.96	375.00		3,328,642.56	612,610.69
1849	29,416,612.45	28,346,738.82			1,688,959.55	685,379.13
1850	32,827,082.69	39,668,686.42			1,859,894.25	2,064,308.21
1851	35,871,753.31	49,017,567.92			2,352,305.30	1,185,166.11
1852	40,158,353.25	47,339,326.62			2,043,239.58	464,249.40
1853	43,338,860.02	58,931,865.52			1,667,084.99	988,031.17
1854	50,261,901.09	64,224,190.27			1,497,798.39	1,108,352.74
1855	48,591,073.41	53,025,794.21			11,497,049.07	827,731.40
1856	47,677,672.13	64,022,663.50			8,917,644.93	1,116,190.81
1857	49,108,229.80	63,875,905.05			3,829,486.64	1,259,920.88
1858	46,802,855.00	41,789,620.96			3,513,715.87	1,352,029.13
1859	35,113,334.22	49,565,824.38			1,756,687.30	1,454,596.24
1860	33,193,248.00	53,187,511.87			1,778,557.71	1,088,530.25
1861	32,979,530.78	39,582,125.64			870,658.54	1,023,515.31
1862	30,963,857.83	49,056,397.62			152,203.77	915,327.97
1863	46,965,304.87	69,059,642.40	87,640,787.95	1,485,103.61	167,617.17	3,741,794.38
1864	36,523,046.13	102,316,152.99	109,741,134.10	475,648.96	588,333.29	30,291,701.86
1865	134,433,728.44	84,922,260.60	209,464,215.25	1,200,573.03	996,553.21	25,441,558.00

*For the half year from

REPORT OF THE SECRETARY OF THE TREASURY.

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TO JUNE 30, 1891, BY CALENDAR YEARS TO 1843 AND BY FISCAL YEARS (ENDED JUNE THAT TIME).

Year.	Dividends.	Net ordinary receipts.	Interest.	Premiums.	Receipts from loans and Treasury notes.	Gross receipts.	Unavail- able.
1791		\$4,409,951.19			\$361,391.34	\$4,771,342.53	
1792	88,028.00	3,009,900.31			5,102,498.45	8,772,458.76	
1793	58,504.00	4,652,200.14			1,797,272.01	6,450,195.15	
1794	302,472.00	5,431,904.87			4,007,950.78	9,439,855.65	
1795	100,000.00	6,114,534.59	\$4,800.00		3,306,424.00	9,515,758.59	
1796	100,000.00	8,377,529.65	42,800.00		320,000.00	8,740,329.65	
1797	80,980.00	8,688,780.99			70,000.00	8,758,780.99	
1798	79,952.00	7,900,495.89	78,675.00		200,000.00	8,179,170.89	
1799	71,040.00	7,546,813.31			5,000,000.00	12,546,813.31	
1800	71,040.00	10,848,749.10			1,565,229.24	12,413,978.34	
1801	88,800.00	12,935,320.95	16,125.00			12,945,455.95	
1802	59,500.00	14,995,703.95				14,995,703.95	
1803		11,094,097.63				11,094,097.63	
1804		11,826,307.38				11,826,307.38	
1805		13,560,693.20				13,560,693.20	
1806		15,559,931.07				15,559,931.07	
1807		16,398,019.26				16,398,019.26	
1808		17,060,661.93				17,060,661.93	
1809		7,773,473.12				7,773,473.12	
1810		9,384,214.28			2,750,000.00	12,134,214.28	
1811		14,422,634.09				14,422,634.09	
1812		9,801,132.76			12,837,900.00	22,639,032.76	
1813		14,340,409.05	300.00		20,184,135.00	40,524,844.05	
1814		11,181,625.16	85.79		23,377,826.00	34,559,536.95	
1815		15,096,916.82	11,541.74	\$32,107.64	35,220,671.40	50,961,237.00	
1816		47,676,985.66	68,605.16	086.09	9,425,084.91	57,171,421.82	
1817	202,426.30	33,099,049.74	267,819.14		466,723.45	33,833,592.33	
1818	525,000.00	21,585,171.04	412.62		8,353.00	21,593,936.66	
1819	675,000.00	24,603,374.37			2,291.00	24,605,665.37	
1820	1,000,000.00	17,840,699.55		40,000.00	3,000,824.13	20,881,493.68	
1821	105,000.00	14,573,379.72			5,000,324.00	19,573,703.72	
1822	297,500.00	20,232,427.94				20,232,427.94	
1823	350,000.00	20,540,666.26				20,540,666.26	
1824	350,000.00	19,381,212.79			5,000,000.00	24,381,212.79	
1825	267,500.00	21,840,858.02			5,000,000.00	26,840,858.02	
1826	402,500.00	25,260,434.21				25,260,434.21	
1827	420,000.00	22,968,363.96				22,968,363.96	
1828	455,000.00	24,763,629.23				24,763,629.23	
1829	490,000.00	24,827,627.38				24,827,627.38	
1830	490,000.00	24,844,116.51				24,844,116.51	
1831	490,000.00	28,526,820.82				28,526,820.82	
1832	490,000.00	31,867,450.66				31,867,450.66	\$1,889.50
1833	474,245.00	33,948,426.25				33,948,426.25	
1834	234,349.50	21,791,935.55				21,791,935.55	
1835	508,480.82	25,430,087.10				25,430,087.10	
1836	222,674.67	50,826,796.08				50,826,796.08	
1837		24,964,153.04			2,992,989.15	27,947,142.19	63,288.35
1838		26,302,561.74			12,716,820.86	39,019,382.60	
1839		21,482,749.61			3,857,276.21	25,340,025.82	1,458,782.93
1840		19,480,115.33			5,589,547.51	25,069,662.84	37,409.25
1841		16,860,160.27			13,659,317.38	30,519,477.65	
1842		19,976,197.25			14,808,735.64	34,784,932.89	11,188.00
1843		8,221,001.26		71,700.83	12,479,708.36	20,782,410.45	
1844		29,320,707.78		666.60	1,877,181.35	31,198,555.73	
1845		29,970,105.80				29,970,105.80	28,251.90
1846		29,699,967.74				29,699,967.74	
1847		26,467,403.16		28,365.91	28,872,399.45	55,368,108.52	30,000.00
1848		35,068,699.21		37,080.00	21,256,700.00	56,992,479.21	
1849		30,721,077.50		487,065.48	28,588,750.00	59,796,892.98	
1850		43,592,888.88		10,550.00	4,045,950.00	47,649,388.88	
1851		52,555,039.33		4,264.92	203,400.00	52,762,704.25	
1852		49,846,815.60			46,300.00	49,893,115.60	
1853		61,587,031.68		22.50	16,350.00	61,603,404.18	103,301.37
1854		73,800,341.40			2,001.67	73,802,343.07	
1855		65,350,574.08			800.00	65,351,374.08	
1856		74,056,699.24			200.00	74,056,899.24	
1857		68,965,312.57			3,900.00	68,969,212.57	
1858		46,655,365.96			23,717,300.00	70,372,665.96	
1859		52,777,107.92		709,357.72	28,287,500.00	81,773,965.64	15,408.34
1860		56,054,599.83		10,008.00	20,776,800.00	76,841,407.83	
1861		41,476,299.49		33,630.90	41,861,709.74	83,371,640.13	
1862		51,919,261.09		68,400.00	329,692,460.50	581,680,121.59	11,110.81
1863		112,094,945.51		602,345.44	776,652,361.57	889,379,652.52	6,000.01
1864		243,412,971.20		21,174,101.01	1,128,873,945.36	1,393,461,017.57	9,210.40
1865		322,031,158.19		11,683,446.89	1,472,224,740.85	1,805,939,345.93	6,095.11

January 1 to June 30, 1843.

TABLE N.—STATEMENT OF THE RECEIPTS OF THE UNITED

Year.	Balance in the Treasury at commencement of year.	Customs.	Internal revenue.	Direct tax.	Public lands.	Miscellaneous.
1866	\$33,933,657.39	\$179,046,651.58	\$309,226,813.42	\$1,074,754.12	\$665,081.03	\$29,036,314.23
1867	160,817,099.73	176,417,810.88	266,027,537.43	4,200,233.70	1,163,575.76	15,037,522.15
1868	198,076,437.09	164,464,599.56	191,087,589.41	1,788,145.85	1,348,715.41	17,745,403.59
1869	158,936,082.87	180,048,426.63	158,356,460.86	765,085.61	4,020,344.34	13,997,338.05
1870	183,781,985.76	194,538,374.44	184,899,756.49	229,102.88	3,350,481.70	12,942,118.30
1871	177,004,116.51	206,270,408.05	143,098,153.63	580,355.37	2,388,046.68	22,093,541.21
1872	138,019,122.15	216,370,286.77	130,642,177.72	.....	2,575,714.19	15,106,051.23
1873	134,656,001.85	188,089,522.70	113,729,314.14	215,254.51	2,882,312.38	17,161,270.05
1874	159,293,673.41	163,103,833.69	102,409,784.90	.....	1,852,428.93	32,575,043.32
1875	178,833,339.54	157,167,722.35	110,007,493.58	.....	1,413,640.17	15,431,915.31
1876	172,804,061.32	148,071,984.61	116,700,732.03	93,798.80	1,129,406.95	24,070,802.31
1877	149,909,377.21	130,956,493.07	118,630,407.83	.....	878,253.68	30,437,487.42
1878	214,887,645.88	130,170,680.20	110,581,624.74	.....	1,079,743.37	15,614,728.09
1879	286,591,473.88	137,250,047.70	113,561,610.58	.....	924,781.66	20,585,697.49
1880	386,832,588.05	186,522,064.60	124,099,373.92	30.85	1,018,508.60	21,978,525.01
1881	231,940,064.44	198,159,676.02	135,264,385.51	1,516.89	2,201,863.17	25,154,850.98
1882	280,607,608.37	220,410,730.25	146,497,595.45	160,141.60	4,753,146.37	31,703,642.52
1883	275,450,903.53	214,706,496.93	144,720,368.98	108,156.60	7,955,864.42	30,796,695.02
1884	374,189,081.98	195,067,489.76	121,586,072.51	70,720.75	9,810,705.01	21,984,881.89
1885	424,941,403.07	181,471,939.34	112,498,725.54	.....	5,705,966.44	24,014,055.06
1886	521,794,026.26	192,905,023.44	116,805,936.48	108,239.94	5,630,999.34	20,988,527.86
1887	526,848,755.46	217,286,893.13	118,823,391.22	32,892.05	9,254,286.42	26,005,814.84
1888	512,851,434.36	219,091,173.63	124,296,871.98	1,565.82	11,202,017.23	24,674,446.10
1889	659,449,099.94	223,832,741.09	130,881,513.92	.....	8,038,651.79	24,297,151.44
1890	673,399,118.18	229,668,584.57	142,606,705.81	.....	6,358,272.51	24,447,419.74
1891	691,527,403.76	219,522,205.23	145,686,240.44	.....	4,039,535.41	23,374,457.23
.....	6,751,086,380.39	4,111,760,797.61	28,131,990.32	280,505,041.52	600,871,302.70	

*Amount heretofore credited to the Treasurer as

REPORT OF THE SECRETARY OF THE TREASURY.

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STATES FROM MARCH 4, 1789, TO JUNE 30, 1891, ETC.—Continued.

Year.	Dividends.	Not ordinary receipts.	Interest.	Premiums.	Receipts from loans and Treasury notes.	Gross receipts.	Unavail-able.
1860	\$519,949,564.38	.....	\$38,083,055.68	\$712,851,553.05	\$1,270,884,173.11	\$172,094.29
1867	462,846,679.92	.....	27,787,330.35	640,426,910.29	1,131,060,920.56	721,827.93
							2,675,918.19
1868	376,434,453.82	.....	29,203,629.50	625,111,433.20	1,030,749,516.52	
1869	357,188,256.09	.....	13,755,401.12	238,678,081.06	609,621,828.27	*2,070.73
1870	396,959,833.87	.....	15,295,043.76	285,474,496.00	606,729,973.63	
1871	374,431,104.94	.....	8,892,839.95	268,768,523.47	652,092,468.36	*3,396.18
1872	364,094,229.81	.....	9,412,637.65	305,047,054.00	679,153,921.56	*18,228.35
1873	322,177,673.78	.....	11,560,530.89	214,961,017.00	548,669,221.67	*3,047.80
1874	299,941,090.84	.....	5,037,665.22	439,272,535.46	744,251,291.52	12,691.40
1875	284,020,771.41	.....	3,979,279.66	387,971,556.00	675,971,607.10	
1876	290,056,534.70	.....	4,029,280.58	397,455,808.00	691,551,673.28	
1877	281,600,642.00	.....	405,776.58	348,871,749.00	630,278,167.58	
1878	237,446,776.40	.....	317,102.30	404,581,201.00	602,345,079.70	
1879	272,322,136.83	.....	1,505,047.63	792,807,643.00	1,066,634,827.46	
1880	353,526,500.98	.....	110.00	211,814,103.00	545,340,713.98	
1881	366,782,292.57	.....		113,750,534.00	474,532,826.57	
1882	403,525,250.28	.....		120,945,724.00	524,470,974.28	
1883	398,287,581.05	.....		555,942,564.00	954,239,145.05	
1884	348,519,869.92	.....		206,877,886.00	555,397,755.92	*1,500.00
1885	323,090,706.38	.....		245,194,303.00	568,887,009.38	47,097.65
1886	356,439,727.06	.....		116,314,850.00	452,754,577.06	
1887	371,403,277.66	.....		154,440,900.00	525,844,177.66	7,497.64
1888	379,266,074.76	.....		285,016,650.00	664,282,724.76	
1889	337,050,058.84	.....		245,111,750.00	632,161,408.84	
1890	403,080,982.63	.....		245,293,650.00	648,374,632.63	
1891	392,612,447.31	.....		373,208,857.75	765,821,305.06	*731.11
	\$8,720,136.29	11,872,076,248.83	\$485,224.45	204,259,220.83	13,259,392,976.59	25,336,213,670.70	2,714,730.71

unavailable and since recovered and charged to his account.

TABLE O.—STATEMENT OF EXPENDITURES OF THE UNITED STATES FROM MARCH 4, JUNE 30, FROM

Year.	War.	Navy.	Indians.	Pensions.	Miscellaneous.
1791.....	\$632,804.03		\$27,000.00	\$175,813.88	\$1,083,971.61
1792.....	1,100,702.09		13,648.85	109,243.15	4,072,064.38
1793.....	1,130,249.08		27,232.83	80,087.81	511,451.01
1794.....	2,039,097.59	\$61,408.97	13,042.46	81,399.24	750,350.74
1795.....	2,430,910.13	410,562.03	23,475.68	98,674.22	1,378,920.69
1796.....	1,260,263.84	274,784.04	113,563.98	100,843.71	801,847.53
1797.....	1,039,402.46	383,631.89	62,396.58	92,256.97	1,259,422.92
1798.....	2,009,522.30	1,381,347.76	16,470.09	104,845.33	1,139,524.94
1799.....	2,406,946.98	2,858,081.84	20,392.19	95,444.04	1,039,591.68
1800.....	2,560,878.77	3,448,716.08	31.22	64,130.73	1,337,613.22
1801.....	1,072,944.08	2,111,424.00	9,000.00	73,533.37	1,114,768.45
1802.....	1,179,148.25	915,561.87	84,000.00	85,440.39	1,462,929.40
1803.....	822,055.85	1,215,230.51	60,000.00	65,902.10	1,842,635.76
1804.....	875,429.83	1,189,852.75	116,500.00	80,092.80	2,191,009.43
1805.....	712,781.28	1,597,500.00	196,500.00	81,854.59	3,768,598.75
1806.....	1,224,335.38	1,049,641.44	234,200.00	81,875.69	2,890,137.01
1807.....	1,288,086.91	1,722,064.47	205,425.00	70,500.00	1,697,897.51
1808.....	2,800,834.40	1,884,067.80	213,575.00	82,576.04	1,425,285.61
1809.....	8,346,772.17	2,427,753.80	337,503.84	87,833.54	1,215,593.79
1810.....	2,294,323.94	1,654,244.20	177,625.00	83,244.16	1,101,144.98
1811.....	2,032,828.19	1,965,566.39	151,875.00	75,045.88	1,367,221.40
1812.....	1,817,798.24	1,959,365.15	177,845.00	91,402.10	1,625,083.21
1813.....	19,652,018.02	6,446,600.10	167,353.28	80,989.91	1,729,435.31
1814.....	20,350,806.86	7,311,290.00	167,334.86	90,164.36	2,208,029.70
1815.....	14,794,294.22	8,660,000.25	530,750.00	69,656.06	2,898,870.47
1816.....	16,012,096.89	3,908,278.30	274,512.16	163,804.15	2,898,741.17
1817.....	8,004,236.53	3,314,598.49	319,463.71	297,374.43	3,518,936.76
1818.....	5,662,715.19	2,953,095.00	505,704.27	690,719.90	2,835,839.61
1819.....	6,506,300.37	3,847,640.42	463,181.39	2,415,939.85	3,067,211.41
1820.....	2,630,892.31	4,387,990.00	315,750.01	8,298,376.81	2,592,921.94
1821.....	4,461,291.78	3,319,243.06	477,095.44	242,817.25	2,223,121.54
1822.....	3,111,981.48	2,224,458.28	575,007.41	1,948,199.40	1,967,996.24
1823.....	3,096,924.43	2,503,765.83	380,781.82	1,780,588.52	1,022,093.90
1824.....	3,240,919.85	2,904,581.50	429,987.90	1,499,326.59	7,155,308.81
1825.....	3,659,914.18	3,049,083.80	724,106.44	1,308,810.57	2,748,544.89
1826.....	3,943,194.37	4,218,902.45	743,447.83	1,556,593.83	2,600,177.79
1827.....	3,948,977.88	4,203,877.45	750,624.88	976,138.86	2,713,476.55
1828.....	4,145,544.56	3,918,780.44	705,084.24	850,573.57	3,676,052.64
1829.....	4,724,291.07	3,308,745.47	576,344.74	949,594.47	3,082,234.62
1830.....	4,767,128.88	3,239,428.63	622,262.47	1,363,297.31	3,237,416.04
1831.....	4,841,835.55	3,856,183.07	930,718.04	1,170,665.14	3,064,646.10
1832.....	5,446,034.88	3,956,370.29	1,352,419.75	1,184,422.40	4,577,141.42
1833.....	6,704,019.10	3,901,356.75	1,802,980.93	4,589,152.40	5,716,245.93
1834.....	5,696,189.38	3,956,260.42	1,003,953.20	3,364,285.30	4,404,728.95
1835.....	5,759,156.89	3,864,939.06	1,706,444.48	1,954,711.32	4,229,694.53
1836.....	11,747,345.25	5,807,718.23	5,037,022.88	2,832,797.96	5,393,279.72
1837.....	13,682,730.80	6,640,914.53	4,348,036.19	2,672,162.45	9,883,370.27
1838.....	12,897,224.16	6,131,580.53	5,504,191.34	2,156,057.29	7,100,664.76
1839.....	8,916,965.80	6,182,294.25	2,528,917.28	3,142,750.51	5,725,990.89
1840.....	7,095,267.23	6,113,896.89	2,331,794.86	2,603,562.17	5,995,394.96
1841.....	8,801,610.24	6,001,076.97	2,514,897.12	2,388,434.51	6,490,881.45
1842.....	6,610,438.02	8,397,242.99	1,199,099.68	1,378,931.33	6,775,624.61
1843.....	2,008,671.95	3,727,711.53	1,578,371.00	839,041.12	3,202,715.00
1844.....	5,218,183.66	6,408,199.11	1,256,532.39	2,032,008.99	5,645,183.86
1845.....	5,746,291.28	6,297,177.89	1,539,351.35	2,400,788.11	5,911,760.98
1846.....	10,413,370.58	6,455,013.92	1,027,693.64	1,811,097.56	6,711,283.89
1847.....	35,840,030.33	7,900,635.76	1,430,411.30	1,744,883.63	6,885,608.35
1848.....	27,688,334.21	9,408,476.02	1,252,296.81	1,227,496.48	5,650,851.25
1849.....	14,558,473.26	9,786,705.92	1,374,161.55	1,328,867.64	12,885,334.24
1850.....	9,687,024.58	7,904,724.66	1,603,591.47	1,866,886.02	16,043,733.36
1851.....	12,161,965.11	8,880,581.38	2,829,801.77	2,293,377.22	17,885,992.18
1852.....	8,821,506.19	8,918,812.10	3,043,576.04	2,401,858.78	17,504,171.45
1853.....	9,910,498.49	11,067,789.53	3,880,494.12	1,756,306.20	17,463,088.01
1854.....	11,722,282.87	10,790,096.32	1,550,329.55	1,232,665.00	26,672,144.68
1855.....	14,648,074.07	13,327,095.11	2,772,990.78	1,477,012.33	24,090,425.43
1856.....	10,963,160.51	14,074,834.64	2,644,263.97	1,296,229.65	31,794,038.87
1857.....	19,159,150.87	12,651,694.61	4,354,418.87	1,310,380.58	28,565,498.77
1858.....	25,679,121.63	14,053,264.64	4,978,206.18	1,219,768.30	26,400,016.42
1859.....	23,154,720.53	14,690,927.90	3,490,534.53	1,222,222.71	23,797,544.40
1860.....	16,472,292.72	11,514,649.83	2,991,121.54	1,100,802.32	27,977,978.30
1861.....	23,001,530.07	12,387,156.52	2,865,481.17	1,034,599.73	23,327,287.69
1862.....	389,173,562.29	42,640,353.09	2,827,948.37	852,170.47	21,885,862.59
1863.....	603,314,411.82	63,261,235.31	3,152,032.70	1,078,513.36	23,198,382.37
1864.....	690,391,048.66	85,704,963.74	2,629,975.97	4,985,473.90	27,572,216.87

* For the half year from

REPORT OF THE SECRETARY OF THE TREASURY.

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1789, TO JUNE 30, 1891, BY CALENDAR YEARS TO 1843 AND BY FISCAL YEARS (ENDED THAT TIME.

Year.	Net ordinary ex- penditures.	Premiums.	Interest.	Public debt.	Gross expendi- tures.	Balance in Treasury at the end of the year.
1791	\$1,919,589.52		\$1,177,863.03	\$690,984.23	\$3,797,436.78	\$973,905.75
1792	5,896,254.47		2,373,611.28	693,050.25	8,962,920.00	783,444.51
1793	1,749,070.73		2,097,859.17	2,633,048.07	6,479,977.97	753,661.69
1794	3,545,299.00		2,752,523.04	2,743,771.13	9,041,593.17	1,151,924.17
1795	4,362,541.72		2,947,059.06	2,841,639.37	10,151,240.15	516,442.61
1796	2,551,393.15		3,239,347.68	2,577,126.01	8,367,776.84	888,905.43
1797	2,836,116.32		3,172,516.73	2,617,250.12	8,625,877.37	1,021,899.04
1798	4,651,710.42		2,055,875.90	970,032.09	8,583,618.41	617,451.43
1799	6,480,166.72		2,815,651.41	1,706,578.84	11,002,396.07	2,161,867.77
1800	7,411,562.97		3,402,601.04	1,138,563.11	11,952,534.12	2,623,311.99
1801	4,981,689.90		4,411,830.06	2,870,876.98	12,273,376.94	3,295,391.00
1802	5,737,079.91		4,239,172.16	5,294,235.24	13,270,487.31	5,020,997.64
1803	4,002,824.24		3,949,462.36	3,306,697.07	11,258,983.67	4,825,811.60
1804	4,452,854.91		4,185,048.74	3,977,206.07	12,615,113.72	4,037,005.26
1805	6,357,234.62		2,057,114.22	4,563,960.63	13,988,309.47	8,999,388.99
1806	6,080,209.36		3,368,908.26	5,772,018.04	15,021,196.26	4,538,123.80
1807	4,984,572.49		3,369,578.48	2,938,141.62	11,292,292.99	9,643,850.07
1808	6,504,334.85		2,557,074.23	16,762,702.04	16,762,702.04	9,941,809.06
1809	7,414,672.14		2,806,074.90	3,586,479.26	13,867,236.30	3,848,056.78
1810	5,311,082.28		3,161,671.09	4,835,241.12	13,309,994.49	2,672,270.57
1811	5,592,604.66		2,585,435.57	5,414,564.43	13,592,604.66	3,502,305.80
1812	17,829,498.70		2,451,272.57	1,998,349.88	22,279,121.15	3,862,217.41
1813	28,082,390.92		5,699,455.22	7,508,668.22	39,190,520.36	5,196,542.00
1814	30,127,686.28		4,593,239.04	3,307,304.00	38,028,230.32	1,727,848.63
1815	26,953,571.00		5,990,090.24	6,638,832.11	39,582,493.35	13,106,592.88
1816	21,373,432.58		7,822,923.34	17,048,139.59	48,244,495.51	22,033,519.19
1817	15,454,609.92		4,536,282.53	20,880,763.57	40,877,646.04	14,989,465.48
1818	13,898,673.78		6,209,954.03	15,080,247.59	35,104,875.40	1,478,026.74
1819	16,390,273.44		5,211,730.56	2,492,195.73	24,004,199.73	2,079,992.38
1820	13,134,530.57		5,161,094.32	21,763,024.85	31,763,024.85	1,198,461.21
1821	10,723,479.07		5,126,073.79	3,241,019.83	19,090,572.69	1,681,592.24
1822	9,827,643.51		5,172,788.79	2,676,160.33	17,676,592.63	4,237,427.55
1823	9,784,154.69		4,922,475.40	607,541.01	15,314,171.00	9,463,922.81
1824	15,330,144.71		4,943,557.93	11,824,835.83	31,808,538.47	1,946,597.13
1825	11,490,450.97		4,366,737.40	7,728,587.38	23,585,804.72	5,201,650.43
1826	13,062,316.20		3,975,542.95	7,065,539.24	24,103,398.46	6,358,686.18
1827	12,653,005.65		3,486,071.51	6,517,596.88	22,656,764.04	6,668,286.10
1828	13,296,041.45		3,098,800.60	9,064,637.47	25,459,479.52	5,972,435.81
1829	12,641,210.40		2,542,843.28	9,860,304.77	25,044,358.40	6,755,704.79
1830	13,229,533.33		1,912,574.93	9,443,173.29	24,585,281.55	6,014,539.75
1831	13,864,067.90		1,373,748.74	14,800,629.48	30,038,446.12	4,502,914.45
1832	16,516,388.77		772,561.50	772,561.50	34,356,098.06	2,011,777.55
1833	22,713,755.11		303,796.87	1,239,746.51	24,257,298.49	11,702,905.31
1834	18,425,417.25		202,152.98	5,974,412.21	24,601,982.44	8,892,858.42
1835	17,514,950.28		57,863.08	328.20	17,573,141.56	20,749,803.96
1836	30,868,164.04				30,868,164.04	46,708,436.00
1837	87,243,214.24			21,822.91	87,265,037.15	37,327,252.09
1838	33,849,718.08		14,996.48	5,590,723.79	39,455,438.35	30,891,196.94
1839	26,495,948.73		309,833.89	10,718,153.53	37,514,936.15	33,157,503.63
1840	24,139,920.11		174,598.08	3,912,015.62	28,226,533.81	29,963,163.46
1841	26,196,840.29		284,977.55	5,315,712.19	31,797,530.03	28,685,111.08
1842	24,361,336.59		773,549.85	7,801,990.09	32,936,876.53	30,321,979.44
1843	11,254,503.60		523,583.91	333,012.64	12,118,105.15	39,186,284.74
1844	20,630,108.01		1,833,452.13	11,158,450.71	33,642,010.85	36,742,829.62
1845	21,895,369.61	\$18,231.43	1,040,458.18	7,536,349.49	30,490,408.71	36,194,274.81
1846	26,418,459.59		842,723.27	371,100.04	27,632,282.90	38,261,959.65
1847	33,801,569.37		1,119,214.72	5,600,067.65	60,520,851.74	33,079,276.43
1848	45,227,454.77		2,390,765.88	13,036,922.54	60,655,143.19	29,410,612.45
1849	39,931,542.61	82,865.81	3,565,535.78	12,804,478.54	56,386,422.74	32,827,082.69
1850	37,165,990.09		3,782,393.03	3,656,335.14	44,604,718.26	35,871,753.31
1851	44,054,717.60		3,696,780.75	654,912.71	48,476,104.31	40,158,353.25
1852	46,389,954.56	170,063.42	4,000,297.80	2,152,290.05	46,712,608.83	43,338,800.02
1853	44,078,156.35	420,498.74	3,665,832.74	6,412,574.01	54,577,061.74	50,261,901.09
1854	51,967,528.42	2,877,818.69	3,070,926.69	17,556,896.95	75,473,170.75	48,077,672.18
1855	56,216,197.72	872,047.39	2,314,464.99	6,662,065.56	66,164,775.96	47,777,672.18
1856	66,772,527.64	385,372.90	1,953,822.37	3,614,618.66	72,726,341.57	49,108,229.80
1857	66,041,143.70	363,572.39	1,593,265.23	2,276,000.05	71,274,567.37	46,802,855.00
1858	72,330,437.17	574,443.08	1,652,055.67	7,505,250.82	82,062,186.74	35,113,334.22
1859	66,355,960.07		2,637,649.70	14,685,045.15	83,678,642.92	33,193,248.69
1860	60,050,754.71		3,144,120.94	13,854,250.90	77,055,125.65	32,979,530.78
1861	62,616,055.78		4,034,157.30	18,797,100.00	85,387,313.08	30,963,857.83
1862	456,879,896.81		13,190,344.84	96,097,322.09	565,667,563.74	46,965,304.87
1863	694,904,575.56		24,729,700.62	181,081,635.07	899,815,911.25	50,523,046.13
1864	811,293,670.14		53,685,412.69	430,572,014.03	295,541,114.86	134,433,738.44

January 1 to June 30, 1843.

TABLE O.—STATEMENT OF THE EXPENDITURES OF THE UNITED

Year.	War.	Navy.	Indians.	Pensions.	Miscellaneous.
1865.....	\$1,030,090,400.06	\$122,617,434.07	\$5,059,360.71	\$16,347,621.34	\$42,989,383.10
1866.....	283,154,676.06	43,285,662.00	3,205,729.32	15,605,549.88	40,613,114.17
	3,568,638,312.28 *3,021,780.07	717,551,816.39 *77,992.17	103,369,211.42 *53,286.61	119,607,656.01 *9,737.87	643,604,554.33 *718,769.52
1867.....	3,572,260,092.35	717,629,808.56	103,422,498.03	119,617,393.88	644,323,323.85
	95,224,415.63	31,034,011.04	4,642,531.77	20,936,551.71	51,110,223.72
1868.....	123,246,648.62	25,775,502.72	4,100,682.32	23,782,386.78	53,009,867.67
1869.....	78,501,990.61	20,000,757.97	7,042,923.06	28,476,621.78	56,474,061.53
1870.....	57,655,675.40	21,780,229.87	3,407,938.15	28,340,202.17	53,237,461.56
1871.....	35,799,991.82	19,431,027.21	7,426,997.44	34,443,894.88	60,481,916.23
1872.....	35,372,157.20	21,240,809.99	7,061,728.82	28,533,402.76	60,984,757.42
1873.....	46,323,138.31	23,526,256.79	7,951,704.88	29,359,426.86	73,328,110.06
1874.....	42,313,927.22	30,932,587.42	6,692,462.09	29,038,414.66	85,141,593.61
1875.....	41,120,645.98	21,497,626.27	8,384,650.82	29,456,216.22	71,070,762.98
1876.....	38,070,888.64	18,963,309.82	5,966,558.17	28,257,395.60	73,599,661.04
1877.....	37,082,735.90	14,959,935.36	5,277,007.22	27,963,752.27	58,926,532.53
1878.....	32,154,147.85	17,365,301.37	4,629,280.28	27,137,019.08	58,177,708.57
1879.....	40,425,690.73	15,125,126.84	5,206,109.08	35,121,482.39	65,741,555.49
1880.....	38,116,916.22	13,536,984.74	5,945,457.09	56,777,174.44	54,713,529.76
1881.....	40,466,460.55	15,686,071.66	6,514,161.09	50,059,279.62	64,416,324.71
1882.....	43,570,494.19	15,032,046.26	9,736,747.40	61,345,193.95	57,219,750.93
1883.....	48,911,382.93	15,283,437.17	7,362,590.34	66,012,573.64	68,678,022.21
1884.....	39,429,603.36	17,292,601.44	6,475,969.29	55,429,228.06	70,920,433.70
1885.....	42,670,578.47	16,021,079.67	6,552,494.63	56,102,267.49	87,494,258.38
1886.....	34,324,152.74	13,907,887.74	6,090,158.17	63,404,864.03	74,166,929.85
1887.....	38,561,025.85	15,141,120.80	6,194,522.69	75,029,101.79	85,264,825.59
1888.....	38,522,436.11	16,926,437.65	6,249,307.87	80,288,508.77	72,952,260.80
1889.....	44,435,270.85	21,378,800.31	6,892,207.78	87,624,779.11	80,664,064.26
1890.....	44,582,838.08	22,006,200.24	6,708,016.67	106,936,855.07	81,403,256.49
1891.....	48,720,065.01	26,113,896.46	8,527,469.01	124,415,951.40	110,048,167.49
Total	4,777,863,340.62	1,207,598,476.37	284,471,240.16	1,373,889,938.50	2,368,549,295.48

* Outstanding

NOTE.—This statement is made from warrants paid by the Treasurer up to June 30, 1896. The

REPORT OF THE SECRETARY OF THE TREASURY. 125

STATES FROM MARCH 4, 1789, TO JUNE 30, 1891, ETC.—Continued.

Year.	Net ordinary ex- penditures.	Premiums.	Interest.	Public debt.	Gross expendi- tures.	Balance in Treasury at the end of the year.
1865	\$1,217,704,199.25	\$1,717,000.11	\$77,395,090.30	\$609,616,141.68	\$1,906,433,331.37	\$33,933,657.89
1866	385,954,731.43	58,476.51	133,067,624.91	620,263,249.10	1,139,344,081.95	165,301,654.76
	5,152,771,550.43	7,611,003.56	502,689,519.27	2,374,677,103.12	8,037,749,176.38	.....
	*4,481,566.24	.....	*2,888.48	*130.35	*4,484,555.03	*4,484,555.03
1867	5,157,253,116.67	7,611,003.56	502,692,407.75	2,374,677,203.43	8,042,233,731.41	160,817,099.73
1868	202,947,733.87	10,813,349.38	143,781,591.91	735,536,980.11	1,069,070,655.27	198,076,537.09
1869	229,915,088.11	7,001,151.04	140,424,045.71	692,549,685.83	1,069,889,970.74	158,936,082.87
1870	190,496,354.95	1,674,680.05	130,694,242.80	261,912,718.31	584,777,996.11	183,781,955.76
1871	184,421,507.15	15,996,555.60	129,235,498.00	383,254,282.13	702,907,842.88	177,004,116.51
1872	157,583,827.58	9,016,794.81	125,576,565.93	399,503,670.65	691,680,838.90	138,019,122.15
1873	153,301,856.19	6,958,266.76	117,357,839.72	405,007,307.54	682,525,270.21	134,066,001.85
1874	180,488,636.90	5,105,919.99	104,750,688.44	233,699,352.59	524,044,597.01	159,293,673.41
1875	194,118,985.00	1,395,073.55	107,119,815.21	422,065,060.23	724,098,933.99	178,833,839.54
1876	171,529,848.27	.....	103,093,544.57	407,377,492.48	682,000,885.32	172,804,061.22
1877	164,857,813.36	.....	100,243,271.23	449,345,272.80	714,446,367.39	149,909,377.21
1878	144,209,963.28	.....	97,124,511.57	323,965,424.05	565,299,898.91	214,887,645.88
1879	134,463,452.15	.....	102,500,874.65	353,676,944.90	590,641,271.70	286,591,453.88
1880	161,619,934.53	.....	105,327,949.00	699,445,609.16	966,303,682.69	380,832,588.05
1881	169,090,652.25	2,785,320.42	95,757,575.11	432,590,280.41	790,233,238.19	231,940,064.44
1882	177,142,897.63	1,061,248.78	82,508,741.18	165,152,335.05	425,865,222.64	280,607,668.37
1883	186,904,232.78	.....	71,077,208.79	271,646,298.53	529,627,739.12	275,450,903.53
1884	206,248,006.29	.....	59,160,131.25	590,081,820.96	855,491,967.50	374,189,081.98
1885	189,547,865.85	.....	54,578,378.48	260,520,690.50	504,646,934.83	434,941,403.07
1886	208,840,678.64	.....	51,386,256.47	211,760,353.43	471,987,288.54	521,794,026.26
1887	191,902,062.53	.....	50,580,145.97	205,216,709.36	447,698,847.86	526,848,755.46
1888	220,190,602.72	.....	47,741,577.25	271,901,321.15	539,833,501.12	512,851,434.36
1889	214,838,951.20	8,270,842.46	44,715,007.47	249,760,258.05	517,685,059.18	659,449,099.94
1890	240,995,131.31	17,292,362.65	41,001,484.29	318,922,412.35	618,211,390.60	673,399,118.13
1891	261,637,202.55	20,304,224.06	36,099,284.05	312,206,367.50	630,247,078.16	691,527,403.76
	317,825,549.37	10,401,220.61	37,947,135.37	365,352,470.87	731,126,376.22	726,222,332.60
	9,992,372,291.13	125,608,013.65	2,682,075,770.18	11,807,130,532.43	24,607,276,607.39	.....

warrants.

outstanding warrants are then added, and the statement is by warrants issued from that date.

PAPERS

ACCOMPANYING

REPORT OF THE SECRETARY OF THE TREASURY.

REPORT OF THE TREASURER.

TREASURY OF THE UNITED STATES,
Washington, December 1, 1891.

SIR: I have the honor to submit the annual report on the operations and condition of the Treasury.

For convenience of reference, the tabular statements relating to the work of the past fiscal year, as well as those covering longer periods of time, are presented in the Appendix, where they are grouped according to their topics in the following general order: The revenues and expenditures; the state of the Treasury; the receipts and disbursements of moneys; the issue and redemption of currency; the circulation; the public debt; and the redemption of national-bank notes.

In the preparation of the tables it has been the aim to begin with the the minutest particulars that possess any degree of public interest, to combine these into classes and groups, and lastly to deduce the net results. The operations of the fiscal year, forming the chief subject-matter in hand, are shown with much attention to detail, while those of former years, where brought in for the purpose of presenting a connected historic survey, are treated in a more summary manner. From considerations suggested by current discussion and events, these tables have been a good deal elaborated, for which perhaps no apology will be necessary, if in any measure they may serve to throw new light on the matters to which they relate.

Important legislation, creating a new kind of currency, imposing a new responsibility upon the Treasury, and completely transforming some of the Departmental statements, has made it necessary to alter a number of tables which have been more or less familiar to the readers of former reports. Some other tables heretofore published, relating to transactions long past, or to events of transient interest only, have been shortened or dropped; but no matter of this kind has been omitted, it is believed, that would be useful in forming an understanding of the business of the Treasury, or its bearing upon the financial history of the country. So far as it has been possible the statistics relating to similar subjects have been compiled according to a uniform plan and are presented in uniform shape.

PAPERS ACCOMPANYING THE
REVENUES AND EXPENDITURES.

There was a decrease of \$10,468,535.32 in the net ordinary revenues of the Government for the fiscal year as compared with those of the year before, from \$403,080,982.63 to \$392,612,447.31. At the same time there was an increase of \$57,636,198.14 in the ordinary expenditures, excluding therefrom the amount paid in premium on the public debt. The surplus revenues were thus cut down from \$105,344,496.03 to \$37,239,762.57. Of this last sum \$10,401,220.61 was expended in premium on bonds purchased, leaving \$26,838,541.96 of surplus for the year applicable to the extinction of as much of the principal of the debt.

The net ordinary receipts and expenditures for the two years, together with the premiums paid, are shown in the following table:

	1890.	1891.	Increase.	Decrease.
REVENUES.				
Customs	\$229,668,584.57	\$219,522,205.23	.....	\$10,146,379.34
Internal revenue	142,606,705.81	145,686,349.44	\$3,079,543.63	.....
Sale of public lands	6,358,272.51	4,029,535.41	.....	2,328,737.10
Miscellaneous sources	24,447,419.74	23,374,457.23	.....	1,072,962.51
Total	403,080,982.63	392,612,447.31	3,079,543.63	13,518,078.95
Net decrease .....	.....	.....	.....	10,468,535.32
EXPENDITURES.				
Civil and miscellaneous:				
Customs, light-houses, public build- ings, etc	19,734,371.01	24,907,689.16	5,175,317.25	.....
Internal revenue	3,028,068.31	16,552,292.50	12,624,224.19	.....
Interior civil (lands, patents, etc.) ..	8,442,413.14	15,281,705.34	6,839,292.20	.....
Treasury proper (legislative, execu- tive, and other civil)	43,430,561.05	45,217,510.47	1,786,949.42	.....
Diplomatic (foreign relations)	1,648,276.50	2,028,715.29	380,438.67	.....
Judiciary	4,219,505.49	6,058,254.76	1,838,689.27	.....
War Department	44,582,838.08	48,720,065.01	4,137,226.93	.....
Navy Department	22,006,206.24	26,113,896.46	4,107,690.22	.....
Interior Department (Indians and pen- sions)	113,644,901.74	132,943,420.41	19,298,518.67	.....
Interest on public debt	36,099,284.05	37,547,135.37	1,447,851.32	.....
Premium on public debt	20,304,224.06	10,401,220.61	.....	9,903,003.45
Total	318,040,710.66	365,773,005.35	57,636,198.14	9,903,003.45
Net increase .....	.....	.....	47,733,194.69	.....
Surplus	85,040,271.97	26,838,541.96	.....	58,201,730.01

Besides the revenues, the amount of which is given as shown by the receiving warrants issued, there was covered into the Treasury during the year the aggregate sum of \$373,208,857.75 as receipts on account of the public debt, consisting of gold coin, silver dollars, and legal tender notes deposited for certificates to be circulated as money, of United States notes received for issue in place of others destroyed, of 4 per cent bonds issued for refunding certificates, of Treasury notes of 1890 issued, and lastly of the fund which before had been on deposit with the Treasurer, as agent, for the retirement of national bank notes.

The expenditures on the same account, which will be noticed more in detail under another head, amounted to \$365,352,470.87.

The postal revenues amounted to \$65,762,908.55, an increase of \$4,656,867.26 over those of the preceding year, and the expenditures to \$72,067,580.65, an increase of \$5,056,317.01. Of the revenues \$38,730,624.39 was received and disbursed by postmasters, without passing through the Treasury. The balance standing to the credit of the Post-Office Department on the Treasurer's books was \$5,805,621.79 at the beginning of the year and \$4,242,608.13 at the close.

STATE OF THE TREASURY.

As a public officer the Treasurer is responsible to his superior for the performance of his duties, which consist generally in receiving, keeping, and disbursing the funds of the Government. He stands in the same relations to the Department that a banker does to a depositor. For each receipt or disbursement he must have a proper warrant; for the balance, representing the excess of receipts over disbursements, he must be able to show an equivalent in lawful money or other acceptable assets.

In its essential form the account kept with him on the books of the Department is a simple record of receipts on the one hand and of payments on the other. Save in exceptional cases the Department has no concern in the kinds of money he may receive or pay out. He may accept from the taxpayer any kind of money the law allows, and he may satisfy the public creditor, unless a particular kind is specified in the contract, with any he can most conveniently pay. Hence it follows that the condition of the Treasury, with respect to the proportions of the different kinds of money composing its funds, is dependent much upon the character of the circulating medium of the country, and to a very great extent upon the management of the Treasurer and his subordinate officers. A most important consideration with reference to the state of the Treasury is, therefore, how much of each kind of money the Treasurer may have in his custody against the balance charged to him on the books of the Department.

On June 30, 1890, that balance was \$691,527,403.76. Adding thereto the sum of \$765,821,305.06, which comprises the receipts of the year from all sources, gives \$1,457,348,708.82 as the aggregate to be accounted for on June 30, 1891. Out of this there was disbursed, by warrant, the total sum of \$355,372,684.74 on account of the ordinary expenses of the Government, together with a total sum of \$375,753,691.48 on account of the public debt, making an aggregate disbursement of \$731,126,376.22, and leaving a balance of \$726,222,332.60, for which the Treasurer must be able to produce cash or other valid assets.

The foregoing statement does not, however, comprise the whole of the operations of the Treasury, nor do the figures represent the sum of its liabilities. Besides being the bank of the General Government, the Treasury is also the depository of the Post-Office Department, of the national bank note redemption fund, and of the disbursing officers of the various services of the Government, to whom the moneys to meet the expenditures are advanced in the first instance. Through these channels a stream of money flows continuously in and out of the Treasury, and a varying amount is always on hand, for which the Treasurer is responsible on his so-called agency account, and for which also he must hold cash or available credits. The balance of this account standing on his books was \$95,581,164.22 on June 30, 1890, and \$50,290,009.36 on June 30, 1891. Lastly, the Treasurer held, at the former date, the sum of \$323,789.78, and at the latter, the sum of \$1,342,603.71, which had been received on account of revenues, but not yet covered by warrant or charged to him on the books of the Department. The total liabilities of the Treasury, therefore, in the strictest technical sense in which the term is understood, were \$787,432,157.76 at the opening of the fiscal year, and \$777,854,945.67 at the close.

To meet these liabilities the Treasury held in the vaults and tills of its ten offices, and in the several associated offices of the mint, in the

form of gold, silver, legal tender and other notes, certificates of deposit, minor coin, fractional currency, bonds, interest checks, and coupons, an aggregate of cash items, which with the amounts on deposit to the Treasurer's credit in depository banks, a certain sum deposited under a law of 1836 with the States, and certain unavailable funds, composed exactly the same amounts. Arranged in tabular form the figures make the following showing:

	June 30, 1890.	June 30, 1891.
ASSETS.		
Gold coin and bullion	\$320,933,145.02	\$239,132,228.53
Silver coin and bullion	346,020,003.43	399,746,943.51
Notes and certificates	59,403,509.09	82,742,877.40
Minor coin and fractional currency	134,722.87	328,950.88
Bonds, interest checks, and coupons	37,533.21	27,384.22
Deposits in national bank depositories	30,059,565.32	26,369,482.31
Deposits with States	28,101,644.91	28,101,644.91
Unavailable funds	1,415,433.91	1,405,433.91
Total	787,432,157.76	777,854,945.67
LIABILITIES.		
General account	691,527,403.76	726,222,332.60
Agency account	95,581,764.22	50,290,009.36
Uncovered moneys	323,589.78	1,342,603.71
Total	787,432,157.76	777,854,945.67

Of these assets the coin and paper money were instantly available, with the exception of relatively small amounts of uncurrent coin, which will be noticed on another page. The deposits with banks were subject to the Treasurer's draft. The gold and silver bullion, the former valued by weight, and the latter at the cost price, could be coined into legal-tender pieces, in the one case without loss, and in the other at an apparent profit. The deposits with States, which occupy an anomalous position, and would seem to be well worthy of the consideration of Congress, are held to be without the Treasurer's control, and are not actually carried on his books, while the unavailable funds, representing old losses from deficits and defalcations, have no existence as assets, and are omitted by authority of the Secretary from the statements of cash in the Treasury rendered to him. The true assets and liabilities were, therefore, \$757,915,078.94 on June 30, 1890, and \$748,347,866.85 on June 30, 1891, as given elsewhere in this report. These figures represent, on the one side, the total cash actually at the Treasurer's command, and measure, on the other, his accountability as a public officer and his obligation to pay, whether on demand of the Secretary or of any other person.

Since the moneys of the Treasury are derived from three general sources, which may be described as the revenues, the debt, and public deposits, they are held for as many purposes, and the liabilities fall into as many categories. While generally no separation is made in the moneys themselves, with reference to the accounts on which they were received, and it would be inexact to say that any particular coins or notes are held against a given liability, sums of gold, silver, and legal-tender notes must be kept in reserve against certificates of deposit and Treasury notes, and these sums may be considered as set apart, leaving a residue of assets, which are held in the mass against the deposits

carried in the agency accounts, as well as against the reserve or working balance. In this form the statement would be as follows:

	June 30, 1890.		June 30, 1891.	
ASSETS.				
Against certificates and notes:				
Gold coin and bullion	\$120,830,859.00		\$120,063,069.00	
Silver dollars and bullion	297,556,238.00		357,464,383.00	
Legal-tender notes	11,800,000.00		21,875,000.00	
		\$440,277,097.00		\$499,402,452.00
Against deposits and reserve:				
Gold coin and bullion	190,102,286.02		119,069,159.53	
Silver coin and bullion	49,070,365.43		42,282,560.51	
Notes and certificates	47,573,509.09		60,867,577.40	
Minor coin and fractional cur- rency	194,722.87		328,950.88	
Bonds, interest checks, and cou- pons	37,533.21		27,384.22	
Deposits in national-bank depos- itaries	30,659,565.32		26,369,482.31	
		\$17,637,081.94		\$48,945,414.85
Total		\$557,915,078.94		\$548,347,866.85
LIABILITIES.				
Certificates and Treasury notes		471,402,730.00		541,210,031.00
Deposits, agency account	95,521,164.22		50,290,009.36	
Reserve	190,841,184.72		156,847,826.49	
		\$286,422,348.94		\$207,137,835.85
Total		\$757,915,078.94		\$748,347,866.85

These figures, which exhibit the condition of the Treasury precisely as it stood at the close of business on the days named, without confusing either prospective expenditures with liabilities or anticipated revenues with assets, present, on their face, the apparent incongruity of \$499,000,000 of gold, silver, and notes held against \$541,000,000 of certificates, and of \$248,000,000 in various assets standing against deposits and the reserve, amounting together to only \$207,000,000. The explanation is found in the certificates in the Treasury, against which nothing needed to be held, and which might have been canceled and destroyed without decreasing either the reserve or the assets necessary to protect the certificates in circulation. If the \$31,215,633 of certificates in the Treasury in 1890 and the \$41,807,579 there in 1891 had in fact been destroyed, the statement would have appeared thus:

	June 30, 1890.	June 30, 1891.
ASSETS.		
Against certificates and notes	\$440,277,097.00	\$499,402,452.00
Against deposits and reserve	286,422,348.94	207,137,835.85
Total	726,699,445.94	706,540,287.85
LIABILITIES.		
Certificates and Treasury notes	440,277,097.00	499,402,452.00
Deposits and reserve	286,422,348.94	207,137,835.85
Total	726,699,445.94	706,540,287.85

Since June, 1890, the form of the published monthly statement of assets and liabilities has been twice revised, and the document itself was incorporated, at the last revision, into the debt statement, without, of

course, in any manner affecting the true condition of the Treasury or altering the significance of existing facts. The changes that have been made, where not mere matters of clerical or typographical technicality, have amounted simply to a contraction of scope. The present form extends over less ground than some of the others, but the ground itself, whether admitted or excluded, remains unchanged. Differences of opinion exist respecting the value of the various shapes which have been given to the document at different times, but it is believed that this latest form will commend itself to the public judgment for its simplicity and clearness. It consists of a plain schedule of the moneys and other assets, where each item stands, without comment, at the value fixed by law and charged to the Treasurer, and of an equally plain list of those liabilities only which exist in consequence of the presence of those assets. Where moneys are deposited for a specific object, that object is stated as the liability; but where there is no object more specific than the current needs of the Government, no attempt is made to find one. The Treasury is shown as it stands, not as it would stand in the event of a variety of contingencies, all dependent upon time.

The method by which the state of the Treasury is daily ascertained is illustrated in the appendix, where the condition of each office and the composition of the funds held by the mint on June 30, 1891, are given as reported to the Treasurer. The figures for the ten offices of the Treasury proper are first aggregated, as well as those for the eleven offices of the mint, those for the depositary banks, and those for moneys in transit. The four results are then combined, which brings out the aggregate assets and the liabilities on the agency and general accounts. To put this statement in the form in which it is published monthly the liabilities on general account, which arise from outstanding certificates and Treasury notes of 1890, are set out separately, leaving a remainder which is called the balance, and which in fact represents the liabilities arising from revenues collected and not yet expended. For convenience of comparison the statement for June 30, 1890, in the appendix, is made up as if the fund for the retirement of national-bank notes, which by the act of July 14, 1890, was transferred to the debt statement, had already been covered into the Treasury.

By a direction in the act of March 3, 1891, making deficiency appropriations, the sum of \$10,000, heretofore reported as unavailable in the office of the assistant treasurer in San Francisco, representing losses incurred in his office without default or negligence on his part, has been credited in the account of the Treasurer, and the item has disappeared from the list of unavailable funds. This is the only change that has occurred in these somewhat unsubstantial assets of the Treasury, an itemized statement of which is given, as usual, in the appendix. Including the deposits with certain States, they amount, at present, to \$29,507,078.82 for the Treasury itself, and \$37,277.06 for the Post-Office Department.

THE PUBLIC DEBT.

Although the Treasurer is not charged with the management of the debt of the United States, he receives the proceeds of any loans that may be made, and pays the interest as it falls due, as well as the principal when it matures. This part of his duties requires much of his attention and employs the labors of an important division of his office. Besides, the debt stands in such intimate relations, not only to the Treasury, but to the money circulation of the country as well, that no satisfactory presentation of the condition of either can be made if the

debt be left out of view. For these reasons a brief notice of the public loans and of the changes made in them during the fiscal year will be given.

Incidentally to the transfer of the fund for the retirement of surrendered national-bank circulation from the Treasurer's agency account, where it had been secured by a full deposit of lawful money, to the general Treasury, and the adoption of the outstanding notes as part of the debt of the United States, the debt statement was recast and much simplified. By a later revision, in June, 1891, its scope was still more clearly defined and its contents still more succinctly set forth. In its present shape it presents few of the difficulties which before must have been encountered in the attempt to explain the condition of the debt and the relations of the Treasury thereto.

The outstanding principal of the various loans, classed according to the character of their securities, on June 30, 1890, and June 30, 1891, was as given below, the bank-note redemption fund being included under both dates:

Class.	June 30, 1890.	June 30, 1891.
Interest-bearing loans	\$711,313,110.00	\$610,529,120.00
Matured loans	1,815,805.26	1,614,705.26
Old demand notes	55,032.50	55,647.50
United States notes	346,681,016.00	346,681,016.00
Fractional currency, estimated	6,911,510.97	6,907,679.00
National-bank notes	55,619,359.75	40,018,392.25
Certificates of deposit	471,492,730.00	489,961,614.00
Treasury notes of 1890		50,228,417.00
Total	1,593,889,564.48	1,545,996,591.61

With respect to the conditions and means of payment, the interest-bearing loans were payable at future dates; the matured loans, the old demand notes, the fractional currency, and the national-bank notes were payable on demand, out of any moneys in the Treasury, for retirement without reissue; the United States notes and Treasury notes were redeemable in coin, but when redeemed or received in the revenues the reissue of like amounts was compulsory; and the certificates of deposit were payable out of coin and legal-tender notes reserved for that purpose. Classified according to these conditions, the amounts outstanding at the two dates were as follows:

Condition of payment.	June 30, 1890.	June 30, 1891.
At future dates	\$711,313,110.00	\$610,529,120.00
On demand, without reissue	64,402,708.48	48,596,424.61
On demand, for reissue	346,681,016.00	396,909,433.00
On demand, out of deposits	471,492,730.00	489,961,614.00
Total	1,593,889,564.48	1,545,996,591.61

The total reduction resulting from the operations of the year in the principal of the bonded debt and the circulating notes redeemable without reissue was \$116,590,273.89, effected at a cost, including premiums, of \$126,991,494.48. The amounts retired from each loan, including the redemptions of bank notes in excess of fresh deposits of lawful money, together with the premium paid on bonds purchased and the total cost, are shown in the table below. Full details of the issue and redemption

of circulating notes and certificates of deposit will be found in the appendix.

Loan.	Principal.	Premium.	Total cost.
4½ per cent bonds	\$58,146,550.00	\$70,081.62	\$58,216,631.62
4 per cent bonds	42,627,500.00	10,831,138.99	52,968,638.99
Refunding certificates	9,940.00		9,940.00
Matured debt	201,100.00		201,100.00
Old demand notes	385.00		385.00
Fractional currency	3,831.37		3,831.37
National-bank notes	15,600,987.50		15,600,987.50
Total	116,590,278.87	10,401,220.61	126,991,499.48

Means for this expenditure were found in the \$37,239,762.57 of surplus revenues for the year, together with \$89,751,731.91 of the reserve in the Treasury. The consequent reduction in the annual interest charge was \$4,322,092.35. A considerable part of these disbursements were made at a time when the financial situation of the country was highly critical and the need of such relief was very urgent. At the same time, during the months of September and October, 1890, as a further means of relieving the monetary stringency, there were paid out of the Treasury, chiefly at the offices in Washington and New York, under the circular of the Department dated September 6, the following amounts for interest due from January 1 to July 1, 1891:

Bonds.	Amount.
4 per cent bonds	\$8,970,516.50
Pacific railway 6 per cent bonds	3,060,100.80
Total	12,030,617.30

THE CURRENCY.

According to the revised estimates of the Department and the showing of the accounts of the several offices of the Treasury and mint, the stock of money in the country on June 30, 1890 and 1891, including gold, silver, and currency certificates, but omitting the small outstanding remnants of the old issues of the Government and the State banks, was composed as follows:

Kind.	June 30, 1890.	June 30, 1891.
Gold coin and bullion	\$695,563,029	\$646,582,832
Silver dollars and bullion	380,051,916	438,943,643
Fractional silver coin	76,825,305	77,848,700
Total coin and bullion	1,152,440,250	1,163,375,195
United States notes	346,681,016	346,681,016
Treasury notes of 1890		50,228,417
National-bank notes	185,748,500	107,577,214
Gold certificates	157,502,970	152,486,429
Silver certificates	301,538,731	314,715,185
Currency certificates	12,390,000	23,780,000
Total paper currency	1,003,922,336	1,055,468,261
Aggregate	2,156,362,586	2,218,843,456

These figures, so far as they relate to the metals, represent their subject strictly as it is defined, and nothing more. They do not pretend to be an estimate of the total metallic stock, but only of the monetary stock. The distinction is at once explained and established by considerations which will appear later on.

As between the Treasury and the circulation, the total cash holdings of the various offices, but not the deposits in banks, being included under the former head, and the remainder of the estimated stock under the latter, the distribution of the several kinds of money on the two days is shown below:

Kind.	In Treasury.		In circulation.	
	1890.	1891.	1890.	1891.
Gold.....	\$320,933,145	\$239,132,229	\$374,629,884	\$407,450,623
Silver dollars and bullion.....	323,833,885	380,117,464	56,218,031	58,826,179
Fractional silver coin.....	23,792,718	19,629,480	54,032,567	58,219,220
Total coin and bullion.....	667,559,748	638,879,173	484,880,502	524,496,022
United States notes.....	23,882,039	25,348,656	322,798,977	321,332,360
Treasury notes of 1890.....		9,879,713		40,348,704
National bank notes.....	4,365,837	5,706,920	181,382,733	161,870,285
Gold certificates.....	26,732,120	32,423,560	130,830,859	120,063,059
Silver certificates.....	3,283,513	7,479,219	297,556,238	307,235,966
Currency certificates.....	500,000	1,905,000	11,890,000	21,875,000
Total paper.....	50,463,509	82,742,877	944,458,827	972,725,384
Aggregate.....	727,023,257	721,622,050	1,429,339,329	1,497,221,406

Since the certificates of deposits are mere titles to the ownership of money in the Treasury, and since those in the Treasury itself, whether acquired by redemption and awaiting destruction, or freshly printed and held in readiness for issue, are mere vouchers for use in the settlement of an account, the virtual condition of the currency, as well as that of the Treasury and the circulation, can best be shown by substituting in the place of certificates their value in the kind of money they represent. The notes of 1890 have some peculiarities of their own, which will be considered under another head. By making the substitution for the certificates and treating all the silver and notes for the present as one item, the following result is brought out:

Kind.	Outstanding.	In Treasury.	In circulation.
June 30, 1890:-			
Gold.....	\$695,563,029	\$120,102,286	\$505,460,743
Silver and notes.....	989,306,827	65,428,241	923,878,586
Total.....	1,684,869,856	255,530,527	1,429,339,329
June 30, 1891:-			
Gold.....	646,582,852	119,069,160	527,513,692
Silver and notes.....	1,031,050,573	61,342,859	969,707,714
Total.....	1,677,633,425	180,412,019	1,497,221,406

The statement published by the Secretary of the Treasury under date of July 1, 1891, places the amount of money in circulation on that day at \$1,500,067,555, or \$2,846,149 more than is given above. This difference, although it appears to be one of fact, is really one of time. The Secretary's statement was prepared on the day of its date, from data then at hand, some of which, coming from distant subtreasuries, were

from one or two days to a week old. It happened that in the intervals there were heavy receipts at these offices from the revenues, while a large sum was in transit from depositary banks. These changes in the Treasury are fully explained in the appendix, and the apparent difference in the amount of money in circulation is a direct consequence from them.

It appears from the above figures that during the year there was a net loss of forty-nine millions of gold, with a net gain of nearly forty-two millions of other money, and a consequent net contraction of about seven millions in the whole volume. The details of the movements which together produced this result, as well as those for each year since 1878, may be gathered from the tables in the appendix, which show the composition and distribution of the stock of money, together with the imports and exports of gold, at intervals of a month.

Collated from that source, the figures showing the movements of gold, and the resulting changes in the amount of the general stock of that metal, for each month of the last fiscal year, are as follows:

Month.	Imports.	Exports.	Net production.	Net consumption.	Net gain.	Net loss.
1890.						
July.....	\$1,195,054	\$11,800,029	\$6,752,965	.....	.....	\$3,012,010
August.....	1,724,565	2,135,821	.....	\$1,966,456	.....	2,377,712
September.....	1,425,632	281,627	2,608,882	.....	\$3,752,887	.....
October.....	2,635,583	425,235	.....	368,809	1,811,539	.....
November.....	1,926,401	567,152	2,634,795	.....	3,994,044	.....
December.....	6,033,013	632,354	.....	161,625	5,239,034	.....
1891.						
January.....	1,397,918	729,246	2,239,368	.....	2,908,070	.....
February.....	565,304	4,010,146	2,020,788	.....	.....	1,424,054
March.....	614,170	5,155,736	.....	139,192	.....	4,680,758
April.....	233,318	14,163,116	2,521,550	.....	.....	11,408,248
May.....	212,648	30,580,760	2,865,654	.....	.....	27,502,458
June.....	282,906	15,822,400	123,983	.....	.....	15,419,511
Total.....	18,240,512	86,363,622	21,773,015	2,636,682	17,735,574	66,715,751
Net for year.....	.....	68,117,110	19,136,933	.....	.....	48,980,177

The table perhaps requires no comment, unless it should be a word in explanation of the columns of net production and consumption. These are filled in by adding the imports to the stock of the previous month, subtracting the exports from the sum, and comparing the remainder with the estimated stock at the end of the month. If the remainder is less than the estimated stock, the difference is set down as the net production; if less, as the net consumption for the month. It may be remarked, too, that the figures for the stock are those furnished by the Director of the Mint, and published monthly by the Department, with the exception of those for June in each year, which are taken from the revised estimate published in the Director's annual report. As the regular monthly estimates are unavoidably made from imperfect data, they must be taken as provisional or approximate merely; and necessarily whatever inaccuracies they may contain are reproduced in the figures which here are derived from them. The estimates for the end of each fiscal year, however, may be relied upon as the best that can be obtained. It is assumed, therefore, that the figures above given for the net production of the year are correct, and that the errors, if any, in the column of monthly production are offset by those in the column of monthly consumption.

Such heavy exports of gold as signalized the last six months of the year, the heaviest by far that have been recorded in the history of the country, naturally excited profound interest, not only at home, but throughout the whole world. To the Treasury this outflow was particularly significant, since the Treasury was obliged to furnish all the material. It is well understood, indeed, and it will appear in other parts of the present report, that this gold was drawn almost altogether from the sub-treasury in New York, in exchange for other kinds of money. It is important to know, and the inquiry may throw some light upon the monetary situation, what those other kinds of money were. The records do not appear to have been kept in such a manner as to show directly, and in the lack of better data the daily report of receipts and disbursements rendered to this office have been resorted to. During the period in question the assistant treasurer paid out gold coin for gold certificates directly, for gold certificates and other kinds of money upon what is called his exchange account, and in small sums on disbursing officers' checks. It has been possible, therefore, to compile two tables, which will be found in the appendix, the one showing all the operations involving the paying out of gold for other kinds of money, and the other all the rest of the operations of whatever nature. Summarized for the six months ending with June, the first of these shows the following result:

Kind of money.	Receipts.	Disbursements.	Gain.	Loss.
Gold coin	\$13,602,780	\$92,422,109	.....	\$78,720,320
Standard silver dollars	20,440	884,636	.....	864,190
Fractional silver coin	121	3,329,221	.....	3,329,100
United States notes	11,207,065	3,384,250	\$7,822,715	.....
Treasury notes of 1890	7,537,245	3,216,667	4,320,578	.....
National bank notes	312,045	.....	312,045	.....
Gold certificates	85,792,677	24,475,290	61,317,387	.....
Silver certificates	12,354,668	3,265,783	9,088,885	.....
Total	130,977,956	130,977,956	82,922,610	82,922,610

While some gold was gained from other sources, and considerable sums in exchange for other currency, it is here seen that the operations by which the metal was drawn from the subtreasury resulted in a loss exceeding the actual exports, and exceeding by \$17,000,000 the receipts of gold certificates.

These movements were the result, apparently, of the operation of natural laws. No statute requires the importation, exportation, mining, or industrial employment of a single dollar's worth of gold. Whatever expenditure of time, labor, and substance the cost may have been was made at private risk, presumably for private profit. The motives of the miner and the goldsmith are plain; the circumstances which give the opportunity to either are equally so. The exporter of gold is not less the simple man of business. Before an ounce of gold is put aboard ship his profit is certain or reasonably sure. In the exercise of a legitimate calling, performing, in fact, a necessary and useful service for the commercial world, he is not to blame that his clients have been willing to pay him his premiums, or that his operations in the short space of six months have drained the country of the tenth part of its entire stock of gold. This result, even, is differently viewed by different interests. Nevertheless, the condition of things which has made it possible, whether due to domestic or foreign causes, to financial legislation or the state of trade, whether viewed as unusual and alarming or as ordinary and of no significance, would seem to be worthy of the most careful study. No attempt is here made to throw any light on the subject further than to state the facts and to advance a few points, which, though lying on the surface, are often overlooked.

Concurrently with the operations in gold there went on a set of others, which affected the remainder of the currency to nearly as great an extent. These, however, were induced by causes entirely different and perfectly plain. They consisted in the purchase and coinage of silver, conducted, of course, by the Government in compliance with law, and the contraction of the national-bank circulation, induced, in the main, by the retirement of the bonded debt. The former produced an increase of fifty-eight millions in the stock of silver, and the latter a diminution of eighteen millions in the stock of bank notes. The changes from month to month in the stock of silver dollars and bullion, of fractional silver coin, and national-bank notes, are shown in the following table:

Month.	Increase.		Decrease.		Net increase.
	Silver dollars and bullion.	Fractional silver.	Fractional silver.	National-bank notes.	
1890.					
July.....	\$3,333,155	.....	\$207,051	\$1,404,722	\$1,631,382
August.....	4,025,887	\$188,891	.....	1,119,115	3,095,663
September.....	4,702,322	68,410	.....	1,531,838	3,238,894
October.....	5,870,561	317,513	.....	1,992,482	4,195,582
November.....	5,244,104	146,485	.....	1,281,422	4,109,167
December.....	5,053,074	299,291	.....	1,240,840	4,111,525
1891.					
January.....	4,563,025	57,990	.....	1,784,622	2,836,399
February.....	4,428,553	1,463	.....	1,880,525	2,549,491
March.....	6,203,173	41,793	.....	1,887,960	4,357,006
April.....	4,406,051	196,817	.....	1,307,418	3,295,450
May.....	4,163,508	.....	19,805	1,376,807	2,766,896
June.....	5,343,051	.....	68,408	1,273,625	4,001,018
Total.....	57,336,404	1,318,659	295,264	18,171,376	40,188,423

In order to present a concise view of the changes in the whole money stock the results of the two foregoing tables are combined below:

Month.	Gain of gold.	Loss of gold.	Increase of silver and notes.	Increase of stock.	Decrease of stock.
1890.					
July.....	.....	\$3,912,010	\$1,631,382	.....	\$2,280,628
August.....	.....	2,377,712	3,095,663	\$717,951	.....
September.....	\$3,752,887	.....	3,238,894	6,991,781	.....
October.....	1,841,539	.....	4,195,592	6,037,071	.....
November.....	3,994,044	.....	4,109,167	8,103,211	.....
December.....	5,239,034	.....	4,111,525	9,350,559	.....
1891.					
January.....	2,808,670	.....	2,836,399	5,744,469	.....
February.....	.....	1,424,064	2,549,491	1,125,437	.....
March.....	.....	4,680,758	4,357,006	.....	323,752
April.....	.....	11,408,248	3,295,450	.....	8,112,798
May.....	.....	27,502,458	2,766,895	.....	24,735,562
June.....	.....	15,410,511	4,001,018	.....	11,409,493
Total.....	17,735,574	66,715,751	40,188,423	38,070,479	46,862,233
Net decrease.....	.....	.....	.....	.....	8,791,754

In the appendix will be found tables, occupying a number of pages, in which, for the first time in a public document, the attempt is made to give a connected view of the amount, composition, and general distribution of the money of the country over any extended period of time. They are in the main a further elaboration of matter first presented in the report for 1890, with a considerable enlargement of scope and the introduction of much new material. So full are they that perhaps there is no fact obtainable from the records, not such a mere matter of detail as to possess no statistical interest, relating to their subject and to the

time they cover, from June 30, 1878, to September 30, 1891, that can not be gathered from them. The figures for the Treasury holdings are taken uniformly from the Treasurer's monthly statements of assets and liabilities, while those for the stock of gold and silver are taken, with the exception mentioned below, from the official estimates.

The chief difficulty encountered in the preparation of these tables arose from the insufficiency of data relating to the coin circulation. The records of the coinage and movement of silver dollars are very complete, but the estimates of the stock of gold and of fractional silver coin, down to 1887, had been made at intervals of a year, whereas, for these tables, they were wanted by months. To fill the vacant places a method was adopted which may be briefly explained. By adding to the stock at the beginning of any year the imports for that year, subtracting the exports from the sum, and subtracting this remainder from the estimated stock at the beginning of the next year, a result was obtained which represents the year's domestic production in excess of the use in the arts. This quantity was then divided into twelve equal parts and one part was added to the stock obtained for each month as the result of importations and exportations. While the method is indirect and the result provisional, the only possibility of error is in the distribution of the year's domestic production and consumption. From the nature of the case the approximation to the fact must be close, perhaps close enough for all purposes. With the help of this expedient it became possible to develop the entire scheme of the currency and circulation, by no means simple or easy to understand. The result is submitted with regret that it has been necessary to occupy so much space.

THE CIRCULATION.

The monetary history of the past fiscal year is unusually interesting, and not less so from the character than the magnitude of the movements recorded. Promptly with the beginning of July the autumnal expansion of the circulation set in, drawing material not only from the Treasury reserves and foreign gold, the accustomed sources of supply, but also, a little later on, in greatly increased quantities, from the Government purchases of silver. The month of September witnessed the unparalleled event of the addition of nearly \$62,000,000 to the money in the hands or control of the people. All of this, with the exception of a million of gold imported from other countries, was paid out of the Treasury. During the remainder of the season, to the end of December, there occurred a still farther expansion of thirty millions of dollars, of which twenty-two millions came from the Treasury and eight millions in gold from abroad. Altogether, between the 1st of July and the 1st of January, the circulation was increased by the addition of almost exactly a hundred million dollars, consisting of fifty millions in gold and gold certificates, twenty-seven millions in silver and silver certificates, together with twenty-three millions in notes. To effect this result the Treasury paid out seventy-one millions of dollars on balance and twenty-eight millions in purchases of silver, while the gold mines produced ten millions in excess of the quantity used in the arts, making in all an increase of a hundred and nine millions; but as against this a net million in gold was lost to foreign countries and eight millions in national-bank notes were retired.

While a movement of this kind has occurred annually, since the resumption of specie payments, with the single exception of the year 1885, it never before attained such proportions, or even approached them, since the period of rapid and continuous expansion which followed resumption. The general causes of this annual movement, as well as

the special conditions which influenced it during the past year, are well understood, and need not be mentioned here.

In January there began a reverse current, though not exactly in a reverse direction. The people who had demanded this hundred millions of ready cash had made their use of it, and collectively were ready to part with a considerable portion of it. But the Treasury, which had found the means of paying it out, was not in a position to call it back. Money began to find its way into the great commercial centers, foreign exchange began to rise, and gold bars began to be taken from the Treasury for shipment abroad. The new safeguards thrown about the gold reserve of the Treasury at the last session of Congress were resorted to and doubtless produced their effect, though it would be difficult to estimate the value of the protection they afforded. By the end of June the exports of gold had reached the unexampled figures of \$70,000,000 for the six months, and \$86,000,000 for the year. Opinions, agreeing in the main with respect to the causes of the expansion of the first half of the year, differ widely as to the causes of this rapid contraction in the last half. The facts alone can be discussed in this report.

Concurrently with this outflow of gold the Treasury poured into the circulation eight and a half millions on balance, and about thirty millions through the operations in silver, while nine and a half millions of gold were extracted from the mines in excess of the industrial consumption, and three millions of the same metal were imported, making in all a gain of fifty-one millions. On the other hand, there must be added to the contraction of seventy millions resulting from exports of gold another of nearly ten millions caused by the retirement of national-bank notes, making eighty millions in all, and exceeding the realizations from the sources of supply by twenty-nine millions. In fact, the circulation declined in the six months from \$1,528,736,268 to \$1,499,618,800.

It will of course be understood that these particular gains and losses of monetary material, while they directly affected the circulation in volume, did not in like manner alter it in composition. The value of the gold exported came through the banks out of the pockets of the people, but the metal itself was drawn in great part from the Treasury. Other operations, too, had their usual influence. The actual changes of the six months in the composition of the circulation consisted in a loss of twenty-six millions in gold and gold certificates, together with one of eleven millions in silver and silver certificates, and a net gain of eight millions in notes. The net changes in the volume of the circulation in the first and last six months and the whole twelve months of each of the past thirteen fiscal years, as well as the net average change in each period for the whole time, are shown, in round numbers, in the following table:

Fiscal year.	First six months.		Last six months.		Twelve months.	
	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.
1879.....	\$9,800,000	.....	\$7,200,000	.....	\$17,000,000	.....
1880.....	119,000,000	.....	35,500,000	.....	154,500,000	.....
1881.....	105,600,000	.....	35,700,000	.....	141,300,000	.....
1882.....	73,900,000	.....	.....	\$14,500,000	59,400,000	.....
1883.....	53,700,000	.....	.....	1,400,000	57,300,000	.....
1884.....	26,800,000	.....	.....	20,600,000	6,200,000	.....
1885.....	49,100,000	.....	.....	1,100,000	48,000,000	.....
1886.....	.....	\$2,400,000	.....	38,800,000	.....	\$41,200,000
1887.....	65,400,000	.....	2,700,000	.....	68,100,000	.....
1888.....	66,700,000	.....	.....	11,700,000	55,000,000	.....
1889.....	34,100,000	.....	.....	25,800,000	8,300,000	.....
1890.....	49,900,000	.....	.....	1,300,000	48,600,000	.....
1891.....	99,700,000	.....	.....	29,100,000	70,600,000	.....
Net average...	58,200,000	.....	.....	4,900,000	53,300,000	.....

During the period covered by the fiscal years 1879, 1880, and 1881, in the first six months of which the paper currency passed for the first time at the par of its face value, the circulation was increased by the enormous amount of \$312,000,000, of which all but a hundred million was in the form of foreign and domestic gold. No such transition has been passed through since, nor have any such rapid changes occurred in the circulation. Within that period the amount of money in the hands of the people increased from season to season and from year to year; but since then, with the single exception already noted, a greater or smaller growth from January to July has been followed by a contraction of less volume and narrower variations from July to January. It seems proper, therefore, in computing an average for comparison with the results of a single year, to take only the data for the ten years since 1881, a period in which it is true there have been some changes of legislation, and some other important occurrences both at home and abroad, but a period nevertheless in which substantially the same conditions have prevailed as now exist. For the past ten years, then, it is found that from the end of June to the end of December the circulation has been increased on the average by \$52,200,000, and from the end of December to the end of June it has been diminished on the average by \$14,200,000, leaving an average net gain of \$38,000,000 for the whole twelvemonth. The increase actually realized in the past year has, therefore, been nearly double the average, and in the past two years has exceeded the average by \$43,000,000. The bearing of these facts upon possible future changes in the currency may be worthy of serious consideration in the present situation of the monetary affairs of the country.

The plan of receiving money at the subtreasuries and forwarding new notes, which during the autumn months are wanted in small denominations, from Washington to any place that may be designated, has been found to work well as an aid in moving the crops, and has been in satisfactory operation during the season now about to close. Congress at the last session made provisions, which were promptly carried out, for largely increasing the facilities of the printing bureau, and the personal attention of the Secretary, who early in the summer gave directions that every resource of the Department should be employed in the work of supplying currency, has produced a result which has been not less beneficial to the country than gratifying to the officials of the Treasury. Under his supervision an ample stock of notes, in denominations of from \$1 to \$20, was ready when the time came, a thing that had not happened before in some years. North, South, and West have been freely supplied with whatever kind of currency was wanted, at inconsiderable expense to the consignors, while the Treasury has suffered from none of the embarrassments which it so often labored under before, as the consequence of inadequate foresight and provision.

Between July 1st and November 13th the Department sent out in all directions \$49,272,278 in these small notes, chiefly for deposits in the subtreasury in New York. During the month of September alone these deposits amounted to upwards of \$21,000,000, or more than the aggregate for the months of July, August, and September, 1890, and they were followed by \$13,000,000 more in October. The magnitude of these operations can be appreciated by comparing them with the like transactions in the twelve months of the past fiscal year, which reached a total of only \$61,000,000. With the aid thus rendered to the commercial community the handling of the enormous crops of the year has required little effort and produced no strain, while money has never been easier or more plentiful.

It was pointed out in the last report that the policy, which has been persisted in for the past eight years, of making no provision for the free transportation of United States paper currency to Washington for redemption, imposes double work upon the Department, without effecting any considerable saving of expense. So long as the Government paid the express charges on worn-out notes and certificates they were sent in to the Treasury by bankers from nearly every part of the country for other kinds of money or for checks on the assistant treasurers. In this way the paper circulation was kept in good condition, the people had no difficulty in obtaining the kinds and denominations of money they wished, and the work of redemption was carried on at Washington, where the machinery for it has been erected.

But when the appropriations were stopped, in 1883, and the banks were required to bear the transportation charges on the worn United States currency they sent to Washington, they chose rather to pay it out in their business, if it was at all fit for use, or to send it to their nearest correspondent. The notes thus find their way to the large cities, and next into the subtreasuries, either in the public revenues or for redemption in lawful money. After having been counted and assorted there, they are put up in parcels and sent to the Treasury, of course at the Government's expense. Here they are again counted, in the same manner as if they had been received directly from the interior bank, and they are ultimately paid for, in seasons when the receipts are not largely in excess of the disbursements, by shipments of new money to supply the subtreasuries, likewise at the expense of the Treasury. Only a small proportion of the notes redeemed each year are received directly from private holders, and only a like proportion of the cost of transportation is saved to the Government. At the same time the labor of primary redemption is practically transferred to the subtreasuries, and the Treasury acts merely in review of their work.

A return to the former practice would seem to be prudent, if, indeed, it did not prove, on trial, to be advantageous in several ways. An effect that would probably result from it would be the more rapid retirement of the older issues, of which the remnants still extant are worn by the service of many years.

TREASURY NOTES OF 1890.

On August 19, 1890, there were paid out the first of the Treasury notes authorized by the act of July 14, of the same year, to be issued in the purchase of silver bullion. By the end of the fiscal year the issues had reached \$50,228,417, and on the 30th of September last there were \$64,251,130 of the notes outstanding, of the denominations of \$1, \$2, \$5, \$10, \$20, \$100, and \$1,000.

These notes seem destined to assume a prominent and peculiar place in the financial history of the future. They possess properties and qualities which are nowhere to be found in any other description of currency. The operations of which their issue forms a part are the most important of the kind, in character and magnitude, now going on anywhere in the world.

The exact status of the notes has yet to be settled, and the precise duties they are to perform in the circulation have yet to be determined. The law which creates them presents several difficulties of construction. In constitution they much resemble the older legal-tender notes, while in mode of issue they are more like silver certificates. As the United States notes, after many years of discussion, are generally recognized

to be a loan secured by a reserve of a hundred millions of gold, so the new notes will doubtless, in time, be regarded as a similar loan, secured by a full deposit of silver dollars and bullion. For the time being, at least, they are so treated by the Department, as will be seen by the following table, which shows the amount of bullion and coin held against them at the end of each month, the amount of notes issued, and their distribution as between the Treasury and the circulation:

Month.	In Treasury.		Notes issued.	Notes in Treasury.	Notes in circulation.
1890.	<i>Bullion.</i>	<i>Dollars.</i>			
August	\$2,029,000.00	1,580,000	\$3,609,000	\$2,233,100	\$1,375,900
September	4,278,981.72	3,790,019	8,069,000	962,500	7,106,500
October	10,478,885.03	3,470,115	13,949,000	2,481,649	11,467,351
November	13,101,676.00	6,157,124	19,258,800	2,039,144	17,219,656
December	14,124,934.00	9,965,566	24,090,500	2,193,717	21,896,783
1891.					
January	14,974,799.35	13,820,201	28,804,000	3,702,294	25,101,706
February	16,854,727.89	16,225,973	33,150,700	4,279,421	28,871,279
March	20,211,513.63	16,881,687	37,093,400	3,177,227	33,916,173
April	22,142,943.74	19,588,257	41,731,200	4,710,946	37,020,254
May	23,759,733.00	21,917,614	45,677,347	7,565,067	38,112,280
June	26,889,847.95	23,347,570	50,228,417	9,765,252	40,463,165
July	32,544,670.26	22,449,365	54,994,035	11,309,957	43,684,078
August	37,093,577.01	22,587,458	59,686,035	18,937,685	40,748,350
September	41,579,253.44	22,671,877	64,251,130	7,045,902	57,205,228

As the new notes appear to fall within the provisions of the act of June 8, 1872, they are received on deposit for currency certificates. This has added a new intricacy to the monetary system and a new class to the assets of the Treasury. Let a million dollars' worth of silver be purchased with a million dollars' worth of notes, and let the notes be deposited for certificates, and there appears on the face of things to have been a sudden expansion of the currency by \$3,000,000. Then let the certificates be returned in the revenues, and the Treasury has increased its cash holdings by the same amount, while the real effect of the whole operation has been that the Treasury has received a million of revenue in silver bullion at the market price, and has assumed the obligation to reissue, in its expenditures, a million of its promissory notes for redemption in silver or gold at its own option. The virtual increase of the money stock has, of course, been only a million dollars, in the shape of uncoined silver valued at the current price of that metal in the markets of the world.

In compiling the statistics relating to the currency, and more particularly in attempting to make plain the complicated relations existing between the Treasury, the monetary stock, and the circulation, it has been found convenient, if indeed it be not necessary, to treat the increase of money resulting from the operations of the law of 1890 as consisting of silver alone. On the other hand, since the notes, whether in the hands of the citizen or in the tills of the Treasury, are the evidences of the obligation to pay, not in silver alone, but in gold or silver, the increase of the circulation itself, as well as that of the assets of the Treasury, so far as it is due to the presence of the new paper, is treated as one of notes alone. There is thus presented the paradox of a growth of the stock of silver without change in the stock of notes, and a growth of the circulation of notes without change in the circulation of silver. Upon a little reflection, however, it will doubtless be recognized that this, paradoxical as it may appear, is the simplest view that can be taken of what is actually going on. In this view, at least, has the matter been considered in the present report, the first of the series in which

the subject has been mentioned; and it has been found possible to marshal the statistics of the currency on these lines, in such manner as to exhibit the composition of the whole stock, and its distribution between the Treasury and the people, in the simplest form, without conflict or contradiction, save on this point alone.

An enormous responsibility is imposed by this law of 1890 upon the Treasury and mint. Fifty-four million troy ounces are 3,702,857 avoirdupois pounds, or upwards of 1,851 tons. Nearly two thousand cart loads of silver must be stowed away each year in the Government's vaults. The annual collection of such a vast quantity of treasure, which, though widely distributed, must necessarily accumulate in heavy masses, will ultimately, if continued for any great length of time, raise questions not merely of safe-keeping, but even of national defense.

THE COINAGE.

More liberal appropriations by Congress have made it possible to effect a measurable improvement in the condition of the coinage, particularly the silver, and at the same time to relieve the Treasury of a large part of the superfluous subsidiary coins which it has had to carry for a number of years. During the fiscal year the following amounts of gold, silver, and minor coins were transferred from the Treasury offices to the mint to be recoined, or, in the case of the last, to be cleaned where recoinage was unnecessary:

Kind.	Amount.	Kind.	Amount.
Gold.....	\$32,322.40	5-cent pieces.....	\$13,250.40
Standard silver dollars.....	10,800.00	3-cent pieces.....	839.09
50-cent pieces.....	419,140.50	Minor coins.....	34,049.00
25-cent pieces.....	355,559.50		
20-cent pieces.....	1,807.20	Total.....	970,418.09
10-cent pieces.....	108,659.00		

A loss of \$148.45 was sustained in melting the gold, and one of \$48,366.28 in melting the silver, which were made good to the Treasurer out of the appropriations for recoinage. In the case of the gold the loss was a little less than one-half of 1 per cent, while in that of the silver it was upwards of 5 per cent.

The kind and amount of uncurrent coin held in the several offices of the Treasury on June 30 last, as compared with the total for the same date in 1890, are shown in the following table:

Office.	Gold coin.	Standard silver dollars.	Fractional silver coin.	Total.
Washington.....	\$4,081.40		\$15,056.80	\$19,138.20
Baltimore.....		\$400.00	1,000.00	1,400.00
New York.....	740,000.00		63,000.00	803,000.00
Philadelphia.....		31,000.00	45,430.00	76,430.00
Boston.....	573,676.00		400.00	574,076.00
Cincinnati.....				
Chicago.....	56,000.00			56,000.00
St. Louis.....			2,350.00	2,350.00
New Orleans.....				
San Francisco.....	2,955.00	690.00	180,339.10	183,984.10
Total, 1891.....	1,376,712.40	32,090.00	307,575.90	1,716,378.30
Total, 1890.....	939,768.35	4,624.00	818,017.58	1,762,409.93

While these figures would appear to show that the improvement in the condition of the silver coinage was offset by the degradation in that of the gold, it is not so, for the reason that, as seen above, the cost of restoration to full weight, in the case of gold, is not the tenth part of what it is in the case of silver.

As the result of this expenditure for recoinage and of some special efforts in other directions the amount of fractional silver coin in the Treasury was reduced from \$20,563,708.87 to \$16,846,619.77 in the twelve months ending the 30th of last September. The relief thus afforded to the Treasury vaults may perhaps best be appreciated by considering that the weight of the metal thus parted with, it is hoped permanently, is upward of 200,000 pounds avoirdupois.

Many of the inquiries for fractional silver specify new coins, and much of the difficulty in the way of enlarging the popular use of this kind of money is found in the objection which most bankers appear to have against all coins showing any signs of wear. But for this prejudice, which, perhaps is not confined to banking circles, and which in the case of silver is altogether groundless, it is believed that the present stock of subsidiary silver would long ago have been absorbed into the circulation.

While the laws relating to the gold coinage provide that worn or abraded pieces shall be received by the Treasury only when the reduction in weight is not more than one-half of 1 per cent below the standard after a circulation of twenty years, and at a ratable proportion for any period less than twenty years, there are absolutely no restrictions whatever upon the receipt of any of the silver coins, no matter how much reduced in weight, if the reduction be the effect of natural abrasion, and not of willful mutilation. This distinction between the coins of the two metals was first made in the coinage act of 1873, and has been adhered to without interruption since.

Such differences of practice are always more or less confusing, and this one has caused much popular misunderstanding. However, it is not only based on good grounds, but is almost necessary. The gold coins are manufactured at the mint out of bullion brought by a private citizen, who receives back weight for weight and value for value, without charge for the work done. To all intents and purposes the gold remained throughout the operation what it was at first, the private property of the owner. The benefits of the manufacture into coin were all on the side of the citizen; the cost was all borne by the Government. When in the course of business a coin of such origin is offered to the Treasury in a worn or mutilated condition and of less intrinsic value than the standard fixed by law for the money of the country, it is clearly proper that the Government should prescribe a reasonable limit of loss as the utmost it is willing to assume. Since gold is the monetary standard, the value of the dollar of account is the same as that of the legal-tender piece. If the weight of that piece is allowed to be reduced by wear, the value of the dollar of account depreciates in like proportion. Hence it is highly important that gold coins seriously reduced in weight should not possess the full legal-tender quality, and the law provides that any such coins in the Treasury, when the reduction amounts to more than one-half of 1 per cent of the standard weight, shall be re-coined.

But with the silver coinage the case is entirely different. This, from the dollar down to the dime, is manufactured, not from metal brought to the mint by the producer, and for his benefit, but from bullion pur-

chased by the Government in the market, and at a large profit. That which gives value to the gold dollar, and at the same time to the dollar of account, is weight of metal, to be determined by a scale; that which gives value to the silver dollar, and makes it equal to the dollar of account, is the fiat of the Government, expressed by a stamp. The metal will wear away, and the value with it; but the fiat is unchangeable, and stands so long as the stamp can be recognized. Hence it is that while the Government can not afford to receive gold coins which have been reduced in weight to the extent of one-half of 1 per cent, and it is necessary to the maintenance of the standard of value that this regulation should be rigidly observed, no silver piece is ever weighed at the Treasury to determine whether it shall be received, and none can be rejected for lightness of weight, no matter how great the deficiency, if the loss be apparently due to natural abrasion. A perfectly new silver coin may be handsomer than an old, worn one, and more desirable in the eyes of some people, but it is no better money. In some respects, indeed, the advantage is with the latter. The counterfeiter takes as his model the perfect or nearly perfect piece. The smooth half dollar, quarter, or dime, with its shining surface and faint outlines of devices, is pretty certain to be genuine; but the rough, unworn one, with its soiled and discolored indentations, or even the clean, new one, may be spurious.

These remarks have been ventured upon, not to apologize for the condition of the silver circulation, nor to criticise the public taste in such matters, but with the single object of removing a widespread misapprehension, which has worked to the disadvantage of the Treasury. There can, of course, be no excuse for allowing any part of the coinage to fall into neglect, and no reason why Congress should fail to make proper provisions for keeping all of it in good condition. If Congress does not see fit to do this by making a permanent annual appropriation of as much as may be necessary, another special appropriation of not less than \$150,000 is earnestly recommended.

No extensive investigation of the condition of the gold coinage has been made, but when the exports set in last spring a bag of each of the three larger denominations, taken haphazard out of the vaults of the New York subtreasury, was weighed, with the following results, stated in grains:

Denomination.	Standard weight.	Actual weight.	Actual reduction.	Tolerated reduction.
Double eagles.....	129,000	128,052	48	645
Eagles	129,000	128,880	120	645
Half eagles	129,000	128,808	192	645

In the lack of better statistics these figures may be taken as indicating the condition of this part of the circulation, which is seen to be well up to the standard.

SPURIOUS AND FRAUDULENT ISSUES.

The following table shows the amount of the several kinds of spurious silver coin and paper currency rejected and canceled during the fiscal year at the several offices of the Treasury, all counterfeits of the

genuine, with the exception of \$280 in bank notes, which had been stolen while yet unsigned and fraudulently put in circulation:

Denomination.	Silver coin.	United States notes.	Silver certificates.	National bank notes.	Fractional currency.	Total.
Twenty-five cents	\$135.75				\$11.00	\$146.75
Fifty cents	275.00				225.50	500.50
One dollar	1,536.00	\$11	\$21			1,568.00
Two dollars		60	138	\$40		238.00
Five dollars		220	260	540		1,020.00
Ten dollars		810	10	1,060		1,880.00
Twenty dollars		560		920		1,480.00
Fifty dollars		1,100		50		1,150.00
One hundred dollars		300		600		900.00
Total	1,946.75	3,061	429	3,210	236.50	8,883.25

In the aggregate there was a considerable decrease from the year before, showing presumably a corresponding improvement in the condition of the currency in this respect. Since the date of the last report there have been seen at this office two examples of a new counterfeit of the ten-dollar United States note bearing the vignette of Webster; four of the five-dollar note of the Quincy National Bank, of Quincy, Ill.; and one of the five-dollar note of the First National Bank, of Bay City, Mich., all photographic. Under date of August 6, 1891, the Kinsman National Bank, of Kinsman, Ohio, informed the Treasurer that \$500 of its notes, of the denominations of \$10 and \$20, bearing Treasury numbers 577058 to 577067 and bank numbers 520 to 529, signed by the president but not by the cashier, had been stolen from its vault by burglars. Under the regulations of the Department these notes will not be redeemed at this office. None of them have yet been seen, and it is not known whether they have been put in circulation or not.

There has been redeemed out of the appropriation of \$2,500 made by the act of September 30, 1890, the aggregate sum of \$1,350 of the notes of the Third National Bank, of New York; the First National Bank, of Jersey City; and the National City Bank, of Lynn, which were stolen, between the years 1864 and 1868, from the office of the Comptroller of the Currency. The estimate for the appropriation was prepared in this office from the records of former rejections, and provided for all of the notes certainly known to have been in circulation and not redeemed out of a former appropriation, with a small margin of excess. Since the appropriation became available a sum in notes never before seen at this office has been redeemed, which, together with the remainder of the notes estimated for, would exceed the amount authorized to be used; but as the fact that the notes had become payable was widely announced in the newspapers, and as none of them have been presented since February 4, it is presumable that not many more of them are in existence. Out of a block of forty-two consecutive numbers of the hundred-dollar notes not one has ever been seen, and it has always been understood that these, with a large part of the others, were destroyed by the thief to avoid detection.

Although the appropriation will doubtless be ample to provide for the retirement of the last of these notes, the Treasurer can not take them from the list of irredeemable notes, because so many of them are still theoretically outstanding without any provision to meet them. Although the public may feel reasonably sure that all danger from them has been removed, yet as the matter now stands no one can with safety receive a bank note of any of the same denominations without scruti-

nizing the title and numbers. It is suggested that, considering all the circumstances, it would be well for Congress to appropriate the remaining sum of \$9,750 required to cover the whole theft. The probability that any part of this money would actually be needed is very remote, but such a step would relieve the public of all future risk from a source for many years so extremely dangerous.

NATIONAL BANKS.

United States bonds of the face value of \$142,508,900 were held in trust June 30, 1891, to secure the circulating notes of national banks, a decrease of \$2,719,400 during the year. There were also held \$26,349,500 of bonds to secure public deposits, a decrease of \$3,363,500. Two hundred and thirty-nine new banks were organized and deposited bonds. Seven new depositaries were designated, and ten old ones were discontinued. Altogether \$22,099,050 of bonds were deposited during the year, and \$28,181,950 were withdrawn. The amount of each kind remaining on deposit at the close of the year is shown in the following table:

Class of bonds.	Rate of interest.	To secure circulation.	To secure public mon- eys.	Total.
Bonds issued to Pacific railroads	6	\$7,957,000	\$2,113,000	\$10,070,000
Funded loan of 1891	4½	22,565,950	3,353,000	25,918,950
Funded loan of 1907	4	111,985,950	20,883,500	132,869,450
Total		142,508,900	26,349,500	168,858,400

Under the provisions of the circular of July 2, 1891, \$20,223,350 of 4½ per cent bonds held to secure circulation, and \$2,158,000 held to secure deposits, were continued at 2 per cent.

The amount paid into the Treasury during the year by the national banks as the semi-annual duty on their outstanding circulation was \$1,216,104.72, a decrease of \$38,734.93 as compared with the preceding year.

PACIFIC RAILROAD SINKING FUNDS.

First-mortgage bonds of the Pacific railroads amounting to \$1,331,750 were added during the year to the sinking fund of the Union Pacific Railroad, and \$426,000 of them to that of the Central Pacific Railroad, by purchase. All of the United States 4 per cent bonds formerly belonging to the first-named fund have been sold and the proceeds invested in first-mortgage bonds. The composition of these funds on June 30, 1891, is shown below:

Kind of bonds.	Rate per cent.	Union Pacific sinking fund.	Central Pacific sinking fund.	Total.
United States bonds issued to Pacific railroads	6	\$1,043,000	\$2,548,000	\$3,591,000
Union Pacific first-mortgage	6	3,996,000	385,000	4,381,000
Central Pacific first-mortgage	6	2,496,000	985,000	3,481,000
Central Branch, Union Pacific	6	835,000	20,000	855,000
Eastern Division, Union Pacific	6	791,000	29,000	820,000
Sioux City and Pacific	6	625,500	3,000	628,500
Western Pacific	6	163,000	13,000	176,000
Total		9,949,500	3,985,000	13,932,500

Since the above date \$580,000 of the bonds held for the Union Pacific have been exchanged for a like amount of first-mortgage bonds of the different roads at a profit of \$34,133.15. A like exchange of \$67,000 for the Central Pacific produced a profit of \$2,246.23. In both cases the profits were invested in bonds of the same kind as those acquired by the exchange.

The continued growth of these funds, and the prospect that in a short time they will consist entirely of coupon bonds, will soon make an increase of vault space indispensable, to say nothing of other much-needed conveniences for handling the bonds and cutting the coupons. There are now \$14,000,000 of such bonds in the vault, which must be kept separate according to the road which issued them, the year and month in which they mature, and the series to which they belong. They are issued by six different companies, and mature in different months of each of five years, from 1895 to 1899.

The bonds of the Central Pacific are issued in eight series, and bonds of each series are held. Interest becomes due on them, and coupons must be cut from them, in January, February, May, June, July, August, November, and December. All of these securities are payable to bearer, and if any of them were lost they might be sold in the open market before they were missed. They are kept in the same vault as those of the registered bonds belonging to the national banks, of which there are nearly four thousand lots. These last must all be examined and counted at least once a year by the authorized agents of the banks, a work that should be done inside the vault, but can not be, for want of space.

INDIAN TRUST FUND.

Under the act of June 10, 1876, the bonds and stocks described in the following table are held for the Secretary of the Interior, trustee of various Indian tribes:

Class of bonds.	Registered.	Coupon.	Total.
Arkansas funded debt.....		\$168,000	\$168,000.00
Florida State stocks.....		69,000	69,000.00
Louisiana State stocks.....		22,000	22,000.00
North Carolina State stocks.....		41,000	41,000.00
South Carolina State stocks.....		122,000	122,000.00
Tennessee State stocks.....	\$191,666.66½	123,000	314,666.66½
Virginia State stocks.....	540,000.00		540,000.00
Virginia, Chesapeake and Ohio Canal bonds.....		1,000	1,000.00
United States bonds issued to Pacific railroads.....	256,000.00		256,000.00
Total.....	987,666.66½	546,000	1,533,666.66½

On May 14, 1891, by direction of the trustee, in accordance with the provisions of the Indian appropriation act of March 3, 1891, \$37,000 of Florida and \$15,000 of Louisiana stocks were withdrawn from the fund and became the property of the United States. Next day, by the same authority, \$26,000 of Florida and \$4,000 of North Carolina stocks were transferred in the same manner. At the same time \$24,000 of the United States bonds issued to Pacific railroads were sold and the proceeds deposited in the Treasury to the credit of the Delaware tribe of Indians. On September 3, 1891, the bonds of the State of Maryland, amounting to \$8,350.17, were paid.

MISCELLANEOUS TRUSTS.

United States bonds, of the kinds and amounts described below, are held in trust, under various provisions of law, for the institutions named:

American Printing House for the Blind, 4 per cents.....	\$250,000
Pennsylvania Company, 4½ per cents.....	200,000
Manhattan Savings Institution, 4 per cents.....	75,000
North American Commercial Company, 2 per cents.....	50,000
Total.....	575,000

The bonds and other securities comprised in the following list are the property of the United States, and are held for the Secretary of the Treasury:

Arkansas State bonds.....	\$625,000
Louisiana State bonds.....	560,480
North Carolina State bonds.....	17,000
Tennessee State bonds.....	21,000
Virginia State bonds.....	41,800
Chesapeake and Ohio Canal bonds.....	12,000
South Carolina State stocks.....	3,000
Florida State stocks.....	63,000
Total.....	1,343,280

The bonds of the Nashville and Chattanooga Railroad, formerly in this list, amounting to \$500,000, became due and were paid, together with \$10,000 of accrued interest.

United States 4 per cent bonds, of the face value of \$70,000, are held as a special deposit in the name of the Comptroller of the Currency, for the benefit of the creditors of the Fidelity National Bank, of Cincinnati.

REDEMPTION OF NATIONAL-BANK NOTES.

The heavy fluctuations which have characterized the movements of money have been reflected in the bank-note redemptions, and these have been large in proportion to the volume of the notes outstanding. A greater amount was presented in January, when currency began to return from the interior, than in any previous month since May, 1889, although in the interval the outstanding circulation had been reduced from two hundred and fifteen to one hundred and seventy-five millions. Nearly sixty-seven millions were redeemed in the fiscal year, a decrease of about three millions as compared with the year before. A full statement of the year's operations, including, besides the details presented in former reports, some others which are given for the first time, will be found in the appendix.

What public interest is now taken in the redemption of bank notes is centered chiefly in the effect upon the currency and in the changes in the fund on deposit in the Treasury for the retirement of surrendered circulation, topics which have already been touched upon in this report, and of which the former has perhaps been sufficiently discussed.

The fresh deposits made during the year for the withdrawal of notes from circulation amounted to \$9,728,060, of which \$8,048,530 was received from banks desiring to reduce their issues, \$1,600,200 for banks whose affairs are being wound up, and \$79,330 for the retirement of notes issued prior to the extension of charters.

The redemptions of the year from the aggregate fund were \$25,329,027.50, so that the balance on deposit was reduced from \$55,619,359.75

to \$40,018,392.25. An analyzed statement of the year's operations affecting this fund is given in the following table:

Month.	Deposits.				Redemptions.	Balance.
	For redem- tion.	For retire- ment.	For relasue.	Total.		
1890.						
July.....	\$534,195.00	\$133,900.00	.....	\$668,095.00	\$2,131,929.00	\$54,155,525.75
August.....	2,538,650.00	171,890.00	.....	2,710,540.00	1,796,760.00	55,050,296.75
September.....	2,964,150.00	56,250.00	\$600.00	3,021,000.00	2,674,431.50	56,065,865.25
October.....	776,250.00	217,470.00	.....	993,720.00	2,202,738.00	54,796,857.25
November.....	90,900.00	171,550.00	45,000.00	307,450.00	2,109,684.50	52,994,822.75
December.....	191,250.00	72,625.00	.....	263,875.00	1,935,467.00	51,323,030.75
1891.						
January.....	92,610.00	153,130.00	.....	245,740.00	2,461,760.00	49,107,010.75
February.....	191,700.00	138,495.00	7,950.00	338,145.00	2,270,340.50	47,105,815.25
March.....	223,875.00	167,000.00	.....	390,875.00	2,440,204.50	45,116,485.75
April.....	370,800.00	190,450.00	19,350.00	560,600.00	1,540,088.50	44,156,999.25
May.....	49,500.00	72,190.00	6,430.00	128,120.00	2,081,758.50	42,203,360.75
June.....	34,650.00	55,250.00	.....	89,900.00	2,274,868.50	40,018,392.25
Total.....	8,048,530.00	1,600,200.00	79,330.00	9,728,060.00	25,329,027.50	.....

Partly by anticipation, but chiefly by accepting the Secretary's offer of extension, the banks were able to tide over the maturity of the $4\frac{1}{2}$ per cent bonds without any considerable effect upon their circulation. Indeed, the deposits of the new bonds during the months of July, August, and September exceeded the withdrawals of the old, and the new circulation issued on them not only checked for the time the gradual contractions that had so long been going on, but actually increased the volume of this currency by some \$4,000,000. Only \$1,088,663 of lawful money was deposited in this period for the retirement of outstanding notes, while \$4,566,917 of notes were redeemed, so that the new issues would appear to have amounted to about \$7,500,000.

Some little difficulty has arisen in the administration of the act of June 20, 1874, from the narrowness of the working balance now afforded by the 5 per cent redemption fund. Many banks have less than \$1,000 on deposit, and a majority of them all have no more than \$2,250 each. Although by strict interpretation the law would require all redemptions to be reimbursed by the banks before the delivery of any part of the redeemed notes from the Treasury, this provision was early found to be unnecessarily burdensome to the banks and vexatious to the Department. For the last sixteen years it has been the uniform practice to deliver the redeemed notes for the bank's account on the same day that they were charged to the redemption fund, provided only that the whole amount of the notes did not exceed the lawful money on deposit. Manifestly, while the Treasurer could run no risk in parting with notes already paid for by the bank of issue, and could subserve no useful purpose in refusing to do so, he had no authority to let notes go out of his custody which had not been so paid for, but had in fact been received in exchange for other moneys belonging to the Treasury itself.

As long as the redemption fund was ample this system worked satisfactorily; so satisfactorily, indeed, that many bank officers appear to have given themselves little concern about the matter, and made their remittances, not in response to the Treasurer's notifications, as the law requires, but only when currency was actually received from the Department. In time they began to consider it their right to have their notes collected and delivered, no matter what the amount might be, and to pay for them at their convenience. Many of the smaller banks in

particular, with \$562.50 on deposit, have fallen into this error. In the interval from one assortment of a bank's notes to the next it frequently happens that more are redeemed than this sum will take up, and the redemption agency is obliged to hold a part or all of them for a further deposit. A notice is sent to the bank, expressed as clearly as possible, reciting the facts, and calling for the necessary remittance.

This communication has a forcible legal effect. A bank failing to respond to it forthwith is in default—may even be exposed to summary proceedings. But the paper in many cases is misunderstood or laid aside. No currency being received, no remittance is made. The outstanding notes of the bank continue to be presented at the Treasury and continue to be redeemed. In a few weeks another sum of them has accumulated. Another notice is sent to the bank, and receives as little attention as the first. Eventually a considerable part of a bank's circulation may be in the Treasurer's hands. Correspondence is opened, misunderstandings are found to exist, explanations are asked for, long transcripts of account are exchanged. The bank officer at last is made to see that unless he redeems his notes as the law requires they must go to protest, and be paid out of the proceeds of the sale of the bonds on deposit for their security; also that this proceeding will lead to the forfeiture of his charter and the appointment of a receiver. To prevent such a catastrophe he remits in one sum, perhaps not without inconvenience, what he might have remitted from time to time in a number of small installments, lies out of the use of his money till the return remittance reaches him, feels perhaps that he has been badly treated, and, strange as it may seem, allows himself, by returning to his former methods, to get into the same entanglement the next time the occasion arises.

All this is avoided by the best conducted banks, and might be avoided by all, with no hardship to them, and much less trouble to the Treasurer, by a little attention to the scheme of the redemption system set up by law, if not to the plain requirements of the law itself. The fundamental principle of the plan is that national-bank notes are redeemable at the Treasury out of money advanced by the bank of issue. Necessarily the original deposit must become impaired, and that too without the direct knowledge of the bank. When this has occurred to the extent of not less than \$500, the Treasurer may notify the bank of the fact, whereupon the bank must make good the impairment forthwith, under pain of the severest penalties that can be visited upon a financial institution. The privilege of issuing notes to circulate as money is a valuable franchise, and one which in the nature of things it would be improper to grant without the condition that the notes must be paid on demand. When the demand is made, and it comes to the bank, not by the presentation of the notes themselves, but in the shape of a notification from the Treasurer that they have been presented to him, the bank's first and most important business is to respond by remitting to the Treasurer the amount he asks for. The issue of new notes to take the place of those paid off and destroyed is another matter altogether, with which the Treasurer has nothing whatever to do. "And when," in the language of the statute, "such redemptions have been so reimbursed, the circulating notes so redeemed shall be forwarded to the respective associations by which they were issued; but if any of such notes are worn, mutilated, defaced, or rendered otherwise unfit for use, they shall be forwarded to the Comptroller of the Currency and destroyed, and replaced as now provided by law."

This plan is not less simple than fair, and has been in successful oper-

ation for nearly twenty years. There are many banks throughout the country to whose management such incidents as those above detailed are unknown, and many others in which parts or the whole of the foregoing recital will be recognized as familiar history,—so many, in fact, that in no instance can exception be taken to what at first might appear to be a direct criticism. It is no part of the Treasurer's duty to instruct bank officers in theirs, but a good share of his labors are devoted to this field. It is perhaps unavoidably so; and the assistance he is called upon to render is cheerfully undertaken, in the spirit, he trusts, of friendly correspondence. The remarks and suggestions here ventured upon are advanced in the same feeling, with the single object of adding to the amenities of the relations which exist between the banks and himself.

COMMISSION ON SAFE AND VAULT CONSTRUCTION.

The commission appointed by the Secretary of the Treasury under the provisions of a clause in the deficiency appropriation act of September 30, 1890, "to report on the best method of safe and vault construction, with a view of renewing or improving the vault facilities of the Treasury Department," have been actively engaged in their investigations, and have paid several visits to the Treasurer's Office. The high character and attainments of the gentlemen selected for this important task give the comforting assurance that their labors will be productive of the best results within the reach of modern skill and science.

The chairman, Robert H. Thurston, LL. D., is director of the College of Mechanical Engineering and Mechanic Arts in Cornell University. He served in the Corps of United States Naval Engineers during the late war, and at its close became professor of natural and experimental philosophy in the Naval Academy at Annapolis.

In 1870 he visited Europe, and made extensive investigations in the manufactures of iron and steel in Great Britain. He resigned from the Navy in 1871, to accept the chair of mechanical engineering in the Stevens Institute of Technology at Hoboken, N. J. He served as United States Commissioner to the World's Fair at Vienna, and as a member of the United States Commission to examine into the causes of boiler explosions; also for a number of years on the United States Board appointed to make tests of iron, steel, and various other metals, in which positions he performed valuable scientific services.

Dr. Thurston was the first president of the American Society of Mechanical Engineers. He is the author of many works on mechanics and subjects connected therewith, and is an inventor of note.

Mr. Francis A. Pratt, of Hartford, the second member of the commission, is the senior member of the Pratt & Whitney Company, and its president; the founder of the firm and its great establishments in which are built an enormous variety of tools of all kinds, but especially for gunmakers, and where are built the Gardner, Hotchkiss, and other rapid-firing guns of modern invention, and a great variety of standard iron-workers' tools. This firm has established the standards of sizes and forms for the United States in the whole range of construction of bolts and nuts, of taps and dies; and they secure accuracy, formerly considered absolutely impossible of even approximation, through the use of a measuring machine capable of making measurements to the fifty-thousandth of an inch and less, and actually making their work accurate, as sent to the market, to within the ten-thousandth of an inch of standard.

Mr. Pratt is the founder of this system of application of scientific methods of exact measurement to such purposes in practical construction. As a mechanic he is considered to be fully the equal of any man living, and is considered by his colleagues in his profession the "American Whitworth," having accomplished what Sir Joseph Whitworth aspired to, but never reached.

Mr. Theo. N. Ely, the general superintendent of motive power of the Pennsylvania Railway, is also a noted mechanic and an educated and experienced engineer. He was taught the elements of his profession at the Rensselaer Polytechnic Institute at Troy, N. Y., and graduated with high honors. He later became a member of the engineering staff of the Pennsylvania Railway, and quickly rose to the most important and responsible position in the gift of that great corporation in his department, taking charge of all the mechanical engineering of the road, and finally, as other roads were bought, built, or leased, becoming the general superintendent of the mechanical engineering departments of all. The high standing of that railway in efficiency of all its mechanical departments and all its machinery, whether of transportation or construction, is attributed very largely to Mr. Ely. He has introduced the best and most thoroughly scientific methods and processes of production, of inspection, test, and purchase of materials, and of maintenance and repair, and has made the whole motive-power department a model after which are patterned the similar departments of the majority of other roads in this country and many abroad.

Mr. Ely has also kept up his acquaintance with both the scientific and the practitioner's side of his work, outside his own department, and is regarded as quite as high an authority, on constructive engineering generally, as can be found.

The chairman has kindly furnished the following statement in regard to the labors and plans of the commission:

The United States commission on safe and vault construction, appointed in April last to consider and report upon the desirability and required extent of new vault constructions for the Treasury and upon the best methods of vault construction as practiced at the present time, has been at work, as its members could get together, throughout the intervening period. The three members of this commission are very closely engaged, their regular duties being both important and engrossing; but they have found time to conduct, as suggested by this office, a very extended and thorough investigation of the best of recent methods of insuring safety in the storage of money and securities, and are expected to report upon all the modern systems of safe and vault construction, of detection of attempts to tamper with such receptacles, and of alarm in case of their attack, either by burglars or by their own appointed guardians.

The commission has, up to the present date, given its attention mainly to the generally standard systems of construction of safes and vaults, by the aggregation of laminated plates of iron, steel, and various special compositions; the methods of securely putting together such plates to form a vault or safe; and the best systems of bolting, of securing the corners against injury or penetration, the construction of doors and accessories, and the later forms of bolting doors and of putting in locks and time attachments.

The commission have, in this investigation, visited the establishments of a number of makers, on their invitation, where the processes of construction could be studied, and have seen the whole work of safe-building carried on, including the preliminary fitting of plates, their erection in the vault under construction, and the final completion of the vault in place. They have been permitted to inspect the safes and vaults most recently constructed by the banks and safe deposit companies of the large cities, and have very fully examined the details of their construction. They have studied the newest forms of time-lock and especially the most recent of the devices known as the automatic systems of opening; in which the time-lock not only removes the obstructions preventing the unlocking of the vault doors during the time for which it is set, but also actually unlocks the door at a specified time, and from the inside, thus doing away with the otherwise unavoidable external mechanism for unlocking, and the consequently necessary passage of a spindle or

its mechanical equivalent through the door, a generally admitted cause of weakness and source of more or less danger.

The commission have looked into the latest systems of electric guards and alarms, and their arrangements for protection by simple detection of all attempts of the attacking party to even touch the protected receptacle, and of giving an alarm at a distant point, or at any desired point in the neighborhood. These systems are intended to be efficient irrespective of the extent or efficiency of the presumably burglar-proof construction of the safe or vault.

There remains, on the programme, the further study of a few special constructions, the investigation of the later methods of application of chilled cast iron to such work, and the examination of some new forms of lock and automatic bolting. It is possible that some experimentation may be called for. The commission are expected to report soon after the opening of the next session of Congress.

CONDITION OF BUSINESS.

The recent operations of the Treasury, by their magnitude, have called for unwonted exertions on the part of the administrative and clerical force. In particular, the labor of receiving and forwarding currency has been made very heavy by the unusual demands for shipments or the exchange of one kind of money for another. Much extra work was required to carry out the provisions of the act of December 15, 1890, which provided for the payment of a drawback or rebate to manufacturers and dealers, on certain kinds of tobacco, upon which the tax had been paid. All business that has come to the office has been attended to with promptness and, it is believed, with satisfaction to the public.

I desire to express my appreciation of the prompt and cheerful manner in which the subordinate officers, clerks, and other employes in this office have performed their laborious and, in most cases, responsible duties. Skill and integrity in handling enormous sums of money, diligence and correctness in keeping accounts, are absolute necessities in the daily transactions of the United States Treasury. Anxieties surround the proper conduct of such an office, but with a well-trained and tried force to rely upon cares and worries are greatly lessened.

Thanks are due to Mr. F. W. Lantz for his careful and conscientious work in compiling and editing this report.

I have the honor to be, very respectfully, your obedient servant,

E. H. NEBEKER,
Treasurer of the United States.

Hon. CHARLES FOSTER,
Secretary of the Treasury.

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REPORT OF THE DIRECTOR OF THE MINT.

TREASURY DEPARTMENT,
BUREAU OF THE MINT,
Washington, D. C., November 1, 1891.

SIR: As required by section 345 of the Revised Statutes, I have the honor to hand you herewith a report of the operations of the mints and assay offices of the United States for the fiscal year ended June 30, 1891, the present being the nineteenth annual report of the Director of the Mint and the third of the same series signed by me.

DEPOSITS AND PURCHASES OF GOLD AND SILVER.

Gold.—The gold deposits at the mints and assay offices of the United States during the fiscal year ended June 30, 1891, including gold contained in silver deposits and purchases, aggregated 3,204,880.200 standard ounces, of the value of \$59,625,678.08, against \$49,228,823.56 in the preceding fiscal year, an increase of \$10,396,854.52.

Of the gold deposited, 2,606,111.797 standard ounces, of the value of \$48,485,800.82, were original deposits, and 598,768.403 standard ounces, of the value of \$11,139,877.26, were redeposits.

Of the redeposits \$4,601,070.52 consisted of fine bars bearing the stamp of the United States assay office at New York, being large gold bars redeposited for small; and \$6,538,806.74 were unparted bars, representing the deposits at the minor assay offices shipped to the mint at Philadelphia, for refining and coinage.

Of the gold bullion received at Government institutions during the fiscal year, \$31,555,116.85 was the product of our own mines, against \$30,474,900.25 of the same class of bullion deposited in the preceding fiscal year, an increase of \$1,080,216.60.

Of the domestic gold bullion received at Government institutions during the year, \$17,344,451.21 were fine bars bearing the stamp of private refineries, and \$14,210,665.64 were unrefined domestic bullion.

The distribution among producing States and Territories of the unrefined gold deposited at Government institutions during the year will be found in a table in the appendix to this report.

Foreign gold bullion of the value of \$4,054,822.86, and foreign gold coin of the value of \$8,256,303.80, a total foreign gold of \$12,311,126.66, were deposited and melted at the mints and assay offices during the last fiscal year.

Light-weight domestic gold coins were melted for recoinage of the value of \$583,847.16, and old material, consisting of jewelry, plate, etc., containing gold of the value of \$4,035,710.15.

Silver.—The deposits and purchases of silver, including silver contained in gold deposits, aggregated during the last fiscal year 71,869,663.92 standard ounces, of the coining value (\$1.16 $\frac{1}{4}$ per standard ounce, or \$1.2929 per fine ounce) of \$83,630,154.31, against \$43,565,135.15 in the preceding year, an increase of \$40,065,019.16.

Of the silver received at Government institutions during the year 10,006,707.61 standard ounces, of the coining value of \$11,644,168.84, were redeposits, so that the original deposits of silver aggregated 61,862,956.31 standard ounces, of the coining value of \$71,985,985.47.

Of the silver received, 52,744,990.07 standard ounces, of the coining value of \$61,375,988.45, consisted of fine bars bearing the stamp of private refineries in the United States. All such bars are classified at Government institutions as of domestic production. As a matter of fact, such bars contain foreign as well as domestic silver, as nearly all the silver imported into the United States in the form of base bars, or contained in miscellaneous ores, is reduced at private works in conjunction with domestic ores, and no distinction is made in the resulting product.

Of the domestic silver bullion deposited at the mints during the year, 3,551,805.12 standard ounces, of the coining value of \$4,133,009.58, was unrefined silver from the mines of the United States.

The distribution of the unrefined silver deposited at Government institutions among producing States and Territories, is exhibited in a table in the appendix to this report.

Foreign silver bullion, distinctively known as such, containing 1,964,342.47 standard ounces, of the coining value of \$2,285,780.32, and foreign silver coin, containing 2,189,902.34 standard ounces, of the coining value of \$2,548,249.99, a total foreign silver of \$4,834,030.31, was received at the mints and melted during the year.

Light-weight silver coins of the United States, principally subsidiary pieces transferred from the Treasury to the mints for recoinage, were melted during the year, containing 705,253.82 standard ounces of silver, of the coining value of \$820,658.98.

In addition, trade dollars were sold to the Government as bullion and melted, containing 3,248.47 standard ounces of silver, of the coining value of \$3,780.04.

Old silver, consisting of jewelry, plate, etc., was melted during the year, containing 703,414.02 standard ounces, of the coining value of \$818,518.11.

The coining value of the gold and silver (not including redeposits) received at the mints and assay offices of the United States each fiscal year since 1880 is exhibited in the following table:

VALUE OF THE GOLD AND SILVER (NOT INCLUDING REDEPOSITS) RECEIVED AT THE MINTS AND ASSAY OFFICES, 1880-1891.

Fiscal years.	Gold.	Silver (coining value).	Total value.
1880.....	\$98,835,096	\$34,640,522	\$133,475,618
1881.....	130,833,102	30,791,146	161,624,248
1882.....	66,756,652	33,720,491	100,477,143
1883.....	46,347,106	36,869,834	83,216,940
1884.....	46,326,678	36,520,290	82,846,968
1885.....	52,894,075	36,789,774	89,683,849
1886.....	44,909,749	35,494,183	80,403,932
1887.....	65,223,072	47,756,918	112,979,990
1888.....	72,225,497	41,331,014	113,556,511
1889.....	42,136,436	41,238,151	83,374,587
1890.....	42,663,095	42,644,719	85,307,814
1891.....	48,485,801	71,985,985	120,471,786

The usual tables exhibiting, by weight and value, the deposits and purchases of gold and silver, at each of the mints and assay offices, will be found in the Appendix.

COINAGE.

The coinage executed during the fiscal year at the four coinage mints located at Philadelphia, San Francisco, Carson City, and New Orleans, aggregated 119,547,877 pieces, of the nominal value of \$63,611,159.35, against 112,698,071 pieces, of the nominal value of \$60,254,436.93, struck in the preceding fiscal year.

The gold coins aggregated 1,414,154 pieces, of the value of \$24,172,302.50, of which \$22,062,880 were in double-eagles, \$1,170,100 in eagles, \$908,445 in half-eagles, and \$30,777.50 in quarter-eagles.

The bulk of the gold coinage was executed for depositors at the mints on the Pacific coast.

The coinage of the three-dollar and one-dollar gold pieces, as well as the three-cent nickel piece, was discontinued by act of Congress ap-

proved September 26, 1890, and no pieces of these denominations were struck during the fiscal year ended June 30, 1891.

The silver coinage consisted of 36,232,802 silver dollars, \$82,637.50 in half-dollars, \$195,118.75 in quarter-dollars, and \$1,761,462.10 in dimes.

The minor coinage, executed at the mint at Philadelphia, consisted of 13,338,275 nickel five-cent pieces, of the nominal value of \$666,913.75, and 50,002,275 one-cent bronze pieces, of the nominal value of \$500,022.75.

The coinage of the mints during the last fiscal year is recapitulated in the following table:

COINAGE, FISCAL YEAR 1891.

Description.	Pieces.	Value.
Gold	1,414,154	\$24,172,202.50
Silver dollars	36,232,802	36,232,802.00
Subsidiary silver coins	18,560,371	2,039,218.35
Minor coins	63,340,530	1,166,936.50
Total	119,547,877	63,611,159.35

In the Appendix will be found tables exhibiting, by institutions and by denominations of pieces, the coins struck at the mints during the fiscal year 1891, and also during the calendar year 1890.

A table is also presented exhibiting the coinage of the mints each calendar year since the organization of the Mint in 1792 to the close of the fiscal year 1891.

GOLD AND SILVER BARS MANUFACTURED.

In addition to the coinage of the mints, gold and silver bars were manufactured during the fiscal year of the value of \$39,603,199.42, as follows:

BARS MANUFACTURED, 1891.

Description.	Value.
Gold	\$31,165,541.77
Silver	8,437,657.65
Total	39,603,199.42

MEDALS AND DIES MANUFACTURED.

During the last fiscal year 1,237 dies were prepared in the engraving department of the mint at Philadelphia, as exhibited in the following table:

DIES MANUFACTURED, 1891.

Description.	Number.
For gold coinage.....	93
" silver coinage	625
" minor coinage	486
" proof coinage	20
" Secretary Windom medal.....	3
" Director of the Mint medal.....	2
" Superintendent of the Mint medal.....	2
" Indian peace medal.....	2
" annual assay medal.....	2
" Railway Mail Service medal.....	2
Total	1,237

The number of medals manufactured aggregated 3,293, distributed as follows:

MEDALS MANUFACTURED, 1891.

Description.	Number.
Gold.....	191
Silver.....	1,502
Bronze.....	1,600
Total	3,293

The detailed description of the medals manufactured during the year will be found in the Appendix to this report.

The following table exhibits the number of medals and proof sets, as well as single-proof coins sold, during the year:

MEDALS AND PROOF COINS SOLD, 1891.

Description.	Number.	Value.
Medals:		
Gold.....	234	\$9,321.65
Silver.....	1,558	1,867.50
Bronze.....	823	606.19
Total	2,615	11,885.34
Proof sets:		
Gold.....	36	1,386.00
Silver.....	550	1,499.50
Minor.....	1,903	152.24
Total	2,489	3,037.74
Single proof pieces:		
Gold proof pieces.....	42	250.00

The net profit realized from the sale of medals and proof coins during the year was \$2,025.93, distributed during the four quarters of the year as follows:

NET PROFITS ON MEDALS, 1891.

Quarters.	Amount.
Quarter ending—	
September 30, 1890	\$298.62
December 31, 1890	263.58
March 31, 1891	709.22
June 30, 1891	754.51
Total	2,025.93

GOLD BARS EXCHANGED FOR GOLD COIN.

During the fiscal year gold bars were exchanged for gold coin, at the mint at Philadelphia and the assay office at New York, of the value of \$24,965,695.20, as exhibited in the following table:

FINE GOLD BARS EXCHANGED FOR GOLD COIN, 1891.

Months.	Philadelphia.	New York.	Total.
1890.			
July	\$30,169.07	\$7,407,633.11	\$7,437,802.18
August	60,349.90	6,416,468.97	6,476,818.87
September	65,313.00	783,997.72	854,310.72
October	70,328.56	925,331.00	995,659.56
November	75,290.64	657,680.42	732,971.06
December	40,201.20	402,584.74	442,785.94
1891.			
January	70,379.75	574,955.70	645,335.45
February	55,256.51	3,740,954.35	3,796,210.86
March	85,460.72	1,305,712.07	1,451,172.79
April	175,372.94	552,408.38	727,781.32
May	106,074.58	530,246.19	696,320.77
June	155,861.34	552,658.25	708,519.59
Total	1,050,064.21	23,915,630.99	24,965,695.20

During the second session of the Fifty-first Congress, pursuant to recommendations contained in my last fiscal report, the following act, amendatory of the act of May 26, 1882, relative to the exchange of gold bars for United States gold coin, became a law March 3, 1891:

SEC. 3. That an act to authorize the receipt of United States gold coin in exchange for gold bars, approved May twenty-six, eighteen hundred and eighty-two, be amended to read as follows:

That the superintendents of the coinage mints and of the United States assay office at New York may, with the approval of the Secretary of the Treasury, but not otherwise, receive United States gold coin from any holder thereof in sums of not less than five thousand dollars, and pay and deliver in exchange therefor gold bars in value equaling such coin so received: *Provided*, That the Secretary of the Treasury may impose for such exchange a charge which in his judgment shall equal the cost of manufacturing the bars.

SEC. 4. That all acts or parts of acts inconsistent or in conflict with the provisions of this act are hereby repealed.

In order that the change from the old law may be noted the act of May 26, 1882, is appended:

That the superintendents of the coinage mints, and of the United States assay office at New York, are hereby authorized to receive United States gold coin from any holder thereof in sums not less than five thousand dollars, and to pay and deliver in exchange therefor gold bars in value equaling such coin so received.

The act of May 26, 1882, was construed by the Attorney-General to be mandatory as to the exchange of gold bars for gold coin, and he further held that under its provisions no charge could be imposed for the exchange.

The modified act provides that the Secretary of the Treasury may impose a charge for such exchange equal to the cost of manufacturing the bars; and the exchange is to take place only with the approval of the Secretary of the Treasury, thus making it discretionary.

The day following the approval of the act (March 4, 1891) requests made at the United States assay office at New York for gold bars, for export, in exchange for gold coin were telegraphed the Director. The superintendent was instructed to deliver gold bars in exchange for gold coin upon the payment of a bar charge of 4 cents per hundred dollars in value.

Notwithstanding the charge imposed, exporters of gold continued to take large amounts of gold bars in exchange for gold coin, so that on March 23, 1891, the superintendent was instructed to decline to give gold bars in exchange for gold coin when required for shipment.

Gold bars are furnished in exchange for gold coin, upon the payment of the bar charge, to jewelers and manufacturers for domestic use in the industrial arts, but since March 23 of the present year have not been furnished for export.

As I have pointed out in prior reports, the movement of gold from the United States has been facilitated by the act of May 26, 1882.

The shipment of gold, rather than the purchase of exchange, is, as a rule, decided on a very narrow margin of profit, and it would seem reasonable to infer that when the margin of profit between the actual shipment of specie and the purchase of exchange is small, shipments might be prevented if exporters were required to ship coin or to pay a premium for bars.

The fact that exporters were willing and anxious to pay the charge of 4 cents per hundred dollars in value, and even a higher rate, for gold bars in exchange for coin, is proof conclusive that United States bars of full weight and of recognized purity are a more profitable form of gold for shipment than coin.

It has not been the policy of the Department to throw any obstacle in the way of the free movement of specie, but there is no good reason why the Government of the United States, reversing the policy of foreign banking houses under governmental control, should facilitate it.

While the refusal to furnish bars for export has been powerless to stop the movement of gold this summer from this country, for the reason that specially powerful causes were operating (which are discussed elsewhere in this report), such refusal should have the effect to raise the "gold point" so as to render it unprofitable as a business transaction to ship gold from this country to London unless the price of sterling exchange approximates \$4.89½, a rise of at least one-half a cent.

WORK OF GOVERNMENT REFINERIES.

The acid refineries of the coinage mints and of the assay office at New York operated during the last fiscal year on bullion contain-

ing 9,070,490 standard ounces of gold and silver, of the value of \$32,462,241.42, as exhibited in the following table:

PRODUCT OF ACID REFINERIES, 1891.

Bullion.	Standard ounces.	Value.
Gold	1,256,090.282	\$23,369,121.51
Silver	7,814,399.930	9,093,119.91
Total	9,070,490.212	32,462,241.42

The weight and value of the precious metals treated in the refinery of each of the institutions is exhibited in the following table:

REFINING (BY ACIDS), 1891.

Institutions.	Gross ounces.	Gold.		Silver.		Total value.
		Standard ounces.	Value.	Standard ounces.	Value.	
Philadelphia...	891,000.14	241,605.317	\$4,494,982.64	681,059.68	\$792,505.81	\$5,287,488.45
San Francisco...	1,677,786.14	225,655.692	4,198,245.43	1,522,273.04	1,771,372.26	5,969,617.69
Carson	2,013,792.95	97,150.630	1,607,453.58	2,134,159.75	2,483,385.89	4,290,839.47
New Orleans ..	9,970.51	5,577.473	103,766.94	4,008.80	4,664.78	108,431.72
New York	4,231,003.44	686,101.170	12,764,672.92	3,472,898.66	4,041,191.17	16,805,864.09
Total	8,823,533.18	1,256,090.282	23,369,121.51	7,814,399.93	9,093,119.91	32,462,241.42

PURCHASES OF SILVER.

From July 1 to August 13, 1890, the purchases of silver bullion were made under the provisions of the act of February 28, 1878.

The amount purchased by the Treasury Department, on telegraphic offers of lots of over 10,000 ounces, was 2,431,827.18 standard ounces, costing \$2,382,267.28.

In addition to Department purchases, the purchases of silver at the mints in lots of less than 10,000 ounces, aggregated 663,512.57 standard ounces, costing \$655,139.34, while the silver purchased in partings, bar charges, and fractions aggregated 12,859.72 standard ounces, costing \$12,019.84.

The total amount of silver purchased during the last fiscal year, under the act of 1878, was 3,108,199.47 standard ounces, costing \$3,049,426.46.

The average cost of silver purchased under the act of February 28, 1878, during the first two months of the fiscal year, was \$1.09 per fine ounce.

The following table exhibits the quantity and cost of the silver purchased under the act of February 28, 1878, during the first two months of the fiscal year at each of the coinage mints:

DELIVERIES ON PURCHASES OF SILVER UNDER ACT OF FEBRUARY 28, 1878, DURING FISCAL YEAR 1891.

Mints.	Standard ounces.	Cost.
Philadelphia.....	1,768,110.47	\$1,722,648.66
San Francisco.....	426,400.28	424,062.30
New Orleans	688,821.00	681,576.31
Carson	224,798.63	221,439.19
Total.....	3,108,199.47	3,049,426.46

Adding to this total the amount of silver on hand July 1, 4,415,244.66 standard ounces, costing \$4,027,833.80, makes the total amount of silver available for the coinage of silver dollars during the year, purchased under the act of February 28, 1878, 7,523,444.13 standard ounces, costing \$7,077,260.26.

BULLION DELIVERED ON SILVER PURCHASES, ACT OF FEBRUARY 28, 1878.

Mode of acquisition.	Standard ounces.	Cost.
Purchased by the Treasury Department (lots of over 10,000 ounces) .	2,431,827.18	\$2,382,267.28
Purchased at mints (lots of less than 10,000 ounces)	663,512.57	655,139.34
Partings, bar charges, and fractions	12,859.72	12,019.84
Total delivered on purchases	3,108,199.47	3,049,426.46
Balance July 1, 1890	4,415,244.66	4,027,833.80
Available for coinage of silver dollars during fiscal year 1891 ..	7,523,444.13	7,077,260.26

Of the bullion purchased under the act of February 28, 1878, 7,511,218.49 standard ounces, costing \$7,065,905.45, were used in the coinage of 8,740,327 standard silver dollars; 12,223.76 standard ounces, costing \$11,353.07, were wasted by the operative officers and sold in sweeps, while the balance (consisting of fractions of less than an ounce at each of three coinage mints), 1.88 standard ounces, costing \$1.74, was transferred to the account of "silver purchases under act of July 14, 1890."

The total amount of silver bullion purchased under the act of February 28, 1878, from the commencement, March 1, 1878, to August 13, 1890, was 323,635,576.19 standard ounces, costing \$308,199,261.71, an average of \$0.9523 per standard ounce, or \$1.058 per fine ounce.

SILVER PURCHASES UNDER ACT OF JULY 14, 1890.

On August 13, 1890, the act of July 14, 1890, requiring the purchase monthly of 4,500,000 ounces of silver, went into effect. The amount purchased by the Treasury Department, on telegraphic offers of lots of over 10,000 ounces, to the close of the fiscal year, aggregated 47,710,254.77 standard ounces, costing \$44,861,371.32. In addition to Department purchases, the purchases of silver at the mints in lots of less than 10,000 ounces, aggregated 5,962,742.75 standard ounces, costing \$5,625,039.30, while the silver purchased in partings, bar charges, and fractions (including 1.88 standard ounces, costing \$1.74, transferred from 1878 bullion) aggregated 97,128.09 standard ounces, costing \$91,087.82.

The total amount purchased during the last fiscal year under the provisions of the act approved July 14, 1890, was 53,770,125.61 standard ounces, costing \$50,577,498.44.

The average cost of the silver purchased under the act of July 14, 1890, was \$1.045 per fine ounce.

The following table exhibits the quantity and cost of the silver purchased under the act of July 14, 1890, during the fiscal year, at each of the coinage mints:

DELIVERIES ON PURCHASES OF SILVER UNDER ACT OF JULY 14, 1890, FISCAL YEAR 1891.

Mints.	Standard ounces.	Cost.
Philadelphia	40,940,066.17	\$38,457,142.83
San Francisco.....	7,938,845.65	7,520,895.10
New Orleans.....	3,549,085.13	3,350,092.58
Carson.....	1,355,528.60	1,249,457.93
Total	53,770,125.61	50,577,498.44

The following table is a recapitulation of the purchases, and mode of acquisition, under the act of July 14, 1890:

BULLION DELIVERED ON SILVER PURCHASES, ACT OF JULY 14, 1890.

Mode of acquisition.	Standard ounces.	Cost.
Purchased by the Treasury Department (lots of over 10,000 ounces).....	47,710,254.77	\$44,861,371.32
Purchased at mints (lots of less than 10,000 ounces).....	5,962,742.75	5,625,039.30
Partings, bar charges, and fractions (including 1.88 standard ounces, costing \$1.74, transferred from 1878 bullion)	97,128.09	91,037.82
Total.....	53,770,125.61	50,577,498.44

The act of July 14, 1890, required "That the Secretary of the Treasury shall each month coin 2,000,000 ounces of the silver bullion purchased under the provisions of this act into standard silver dollars, until the first day of July, 1891, and after that time he shall coin of the silver bullion purchased under the provisions of this act as much as may be necessary to provide for the redemption of the Treasury notes herein provided for, and any gain or seignorage arising from such coinage shall be accounted for and paid into the Treasury."

In order to comply with the mandatory coinage of silver dollars required by this act (2,000,000 ounces monthly, equivalent to 2,585,000 silver dollars), there were coined from August 13, 1890, to June 30, 1891, from bullion purchased under the act of July 14, 1890, 27,292,475 silver dollars.

The quantity of silver used in this coinage was 23,454,470.70 standard ounces, costing \$22,747,860.42, while 27,272.98 standard ounces, costing \$25,466.43, were wasted and sold in sweeps, leaving a balance of uncoined silver purchased under the act of July 14, 1890, on hand at the coinage mints June 30, 1891, of 30,288,381.93 standard ounces, costing \$27,804,171.59, distributed as follows:

SILVER BULLION PURCHASED UNDER ACT OF JULY 14, 1890, UNCOINED JUNE 30, 1891.

Mints.	Standard ounces.	Cost.
Philadelphia.....	28,142,429.29	\$25,867,650.88
San Francisco.....	1,475,445.10	1,336,159.12
New Orleans.....	325,280.55	299,831.02
Carson.....	345,226.99	309,520.57
Total.....	30,288,381.93	27,804,171.59

The total amount of silver purchased, during the fiscal year, under both acts, February 28, 1878, and July 14, 1890, was 56,878,325.08 standard ounces, costing \$53,626,924.90, an average cost of \$1.04 $\frac{3}{4}$ per fine ounce.

The total coinage of silver dollars under the two acts was \$36,032,802.

In addition, 200,000 silver dollars were coined in the last month of the fiscal year from trade-dollar bullion.

The total coinage of silver dollars, during the fiscal year, and the total seignorage on such coinage, is exhibited in the following table:

COINAGE OF SILVER DOLLARS, FISCAL YEAR 1891.

Act.	Dollars coined.	Seignorage.
February 28, 1878	\$8,740,327	\$1,674,421.55
July 14, 1890	27,292,475	4,514,614.58
March 3, 1891	200,000	2,297.29
Total	36,232,802	6,221,333.42

The total purchases of silver bullion under the provisions of the act of July 14, 1890, from August 13, 1890, to November 1, 1891, have aggregated 66,588,536 fine ounces, costing \$68,626,565, an average for the whole period of \$1.03 per fine ounce. The balance of silver bullion purchased under the act of July 14, 1890, on hand uncoined at this date, November 1, 1891, is 45,022,085 fine ounces, costing \$45,420,512.

* * * * *

COURSE OF SILVER.

The fluctuations in the price of silver during the last fiscal year covered a wide range, extending from \$0.96 $\frac{1}{4}$ per fine ounce to \$1.21—a variation of nearly 25 cents—a fluctuation greater than in any previous year.

At the commencement of the fiscal year, July 1, 1890, silver was quoted in London at 47 $\frac{9}{16}$ pence (the London quotation being per ounce British standard .925), equivalent, at the par of exchange, to \$1.04 $\frac{1}{2}$ per fine ounce; the New York price at the same date being \$1.05.

From this date, in anticipation of legislation by Congress which would increase the mandatory purchases of silver by this Government, the price of silver rose rapidly until, July 14, 1890, the date of the passage of the new silver law, the price had advanced in London to 49 $\frac{1}{4}$ pence, and in New York to \$1.08 per fine ounce.

As the act was not to take effect until thirty days after its passage, the price fluctuated from 47 $\frac{3}{4}$ pence to 50 $\frac{1}{2}$ pence (\$1.107 per fine ounce), closing at the end of July at the latter figure.

On August 1 the London price advanced to 51 $\frac{1}{8}$ pence (\$1.12) the New York price the same day being \$1.14 $\frac{1}{2}$.

On August 13, the date the new silver law took effect, the price had advanced in London to 51 $\frac{1}{4}$ pence (\$1.123) and in New York to \$1.14 per fine ounce.

The highest price reached was, in New York, August 19, \$1.21 per fine ounce (the highest point touched since 1878), and in London, September 3, 54 $\frac{5}{8}$ pence (\$1.19 $\frac{3}{4}$).

The price in New York did not vary materially from August 19 to September 3, when a decline commenced, extending, with some fluctuations, to the end of the calendar year, the price on December 31, 1890, being in London 48 pence (\$1.052) and in New York \$1.045.

From the 1st of August to the middle of September the difference between the price of silver in New York and London was so great that bullion dealers were enabled to import silver from London at a profit.

During the month of January, 1891, the price of silver fluctuated between $48\frac{1}{2}$ and $46\frac{7}{8}$ pence.

From this time forward the decline continued until April 24, when the lowest point was reached—44 pence (\$0.964) in London, the New York price the same date being \$0.974.

From this date the price gradually advanced, closing June 30, 1891, at $45\frac{3}{4}$ (\$1.003), the New York price on the same date being \$1.014.

The average price of silver during the year was, in London, $47\frac{7}{8}$ pence, equivalent to \$1.044 per fine ounce, and in New York \$1.053; an average difference of nearly 1 cent.

The highest, lowest, and average price of silver each month during the fiscal year, and also during the calendar year 1890, is shown in the following tables:

HIGHEST, LOWEST, AND AVERAGE PRICE OF SILVER BULLION, AND VALUE OF A FINE OUNCE, EACH MONTH DURING THE FISCAL YEAR 1891.

Months.	Highest.	Lowest.	Average price per ounce British standard, .925.	Equivalent value of a fine ounce with exchange at par, \$4.8665.	Average monthly price at New York of exchange on London.	Equivalent value of a fine ounce, based on average monthly price and average rate of exchange.	Average monthly New York price of fine bar silver.
1890.	<i>Pence.</i>	<i>Pence.</i>	<i>Pence.</i>				
July	50 $\frac{1}{2}$	47 $\frac{1}{2}$	49.201	\$1.07854	4.8852	\$1.08367	\$1.08942
August	54 $\frac{1}{2}$	50 $\frac{1}{2}$	52.707	1.15540	4.8718	1.15643	1.16995
September	54 $\frac{1}{2}$	50	53.123	1.10452	4.8504	1.15046	1.16560
October	51 $\frac{1}{2}$	48 $\frac{1}{2}$	49.708	1.08966	4.8590	1.08821	1.10315
November	49 $\frac{1}{2}$	45	47.305	1.03698	4.8615	1.03404	1.04022
December	49 $\frac{1}{2}$	47 $\frac{1}{2}$	48.135	1.05518	4.8388	1.04939	1.05606
1891.							
January	48 $\frac{1}{2}$	46 $\frac{7}{8}$	47.9399	1.05085	4.8637	1.05034	1.0556
February	46 $\frac{1}{2}$	44 $\frac{1}{2}$	45.547	.99844	4.8772	1.00202	1.00521
March	45 $\frac{1}{2}$	44 $\frac{1}{2}$	44.928	.98187	4.8836	.98854	.99074
April	45	43 $\frac{1}{2}$	44.528	.97610	4.8849	.99453	.98015
May	45 $\frac{1}{2}$	44 $\frac{1}{2}$	44.481	.97507	4.8840	.97805	.98355
June	40	44 $\frac{1}{2}$	44.973	.98586	4.8861	.98924	.96557
Average			47.7146	1.04195	4.87050	1.047801	1.052955

HIGHEST, LOWEST, AND AVERAGE PRICE OF SILVER BULLION, AND VALUE OF A FINE OUNCE, EACH MONTH DURING THE CALENDAR YEAR 1890.

Months.	Highest.	Lowest.	Average price per ounce, British standard .925.	Equivalent value of a fine ounce with exchange at par \$4.8665.	Average monthly price at New York of exchange on London.	Equivalent value of a fine ounce, based on average monthly price and average rate of exchange.	Average monthly New York price of fine bar silver.
1890.	Pence.	Pence.	Pence.				
January	44½	44½	44.502	\$0.97554	\$4.8612	\$0.97448	\$0.97510
February	44½	43½	44.042	.96545	4.8674	.96582	.96668
March	44½	43½	43.908	.96251	4.8550	.96025	.96149
April	48	43½	45.451	.99634	4.8722	.99747	1.00538
May	47½	46	46.971	1.02906	4.8596	1.02862	1.04890
June	49	46½	47.727	1.04623	4.8737	1.04780	1.05750
July	50½	47½	49.201	1.07854	4.8852	1.08367	1.08942
August	54½	50½	52.707	1.15540	4.8718	1.15643	1.16995
September	54½	50	53.123	1.16452	4.8504	1.15946	1.16560
October	51½	48½	49.708	1.08966	4.8599	1.08821	1.10015
November	49½	45	47.305	1.03698	4.8615	1.03404	1.04022
December	49½	47½	48.135	1.05518	4.8388	1.04939	1.05606
Average			47½	1.04033+	4.8631-	1.04547	1.05329-

At the lowest price of silver during the fiscal year the value of the silver contained in a silver dollar was \$0.75; at the highest price, \$0.936; at the average price, \$0.814.

The price of silver at the date of the passage of the act of February 28, 1873, which remonetized the silver dollar, and required the purchase and coinage monthly of not less than \$2,000,000 nor more than \$4,000,000 worth of silver, was 55 pence, equivalent to \$1.205 per fine ounce, at which price the commercial value of the silver in the silver dollar was \$0.93½.

From that date the decline was, with some slight intermissions, uniform until May 19, 1883, when silver reached its lowest price, 41½ pence (\$0.912), at which price the commercial value of the silver in the dollar was \$0.705.

The commercial value of the pure silver contained in the silver dollar has been annually since 1873, at the average price of each year, as follows:

BULLION VALUE OF THE SILVER DOLLAR, 1873-1890.

Calendar years.	Average price.	Calendar year.	Average price.
1873.....	\$1.004	1882.....	\$0.878
1874.....	.988	1883.....	.858
1875.....	.961	1884.....	.861
1876.....	.894	1885.....	.823
1877.....	.929	1886.....	.709
1878.....	.891	1887.....	.758
1879.....	.868	1888.....	.727
1880.....	.886	1889.....	.724
1881.....	.881	1890.....	.809

The following table exhibits the value of the pure silver in a silver dollar, reckoned at the commercial price of silver bullion from \$0.90 to \$1.2929 (parity of our coining rate) per fine ounce:

VALUE OF THE SILVER IN A SILVER DOLLAR, RECKONED AT THE COMMERCIAL PRICE OF SILVER BULLION, FROM 90 CENTS TO \$1.2929 (PARITY) PER FINE OUNCE.

Price of silver per fine ounce.	Value of the pure silver in a silver dollar.	Price of silver per fine ounce.	Value of the pure silver in a silver dollar.	Price of silver per fine ounce.	Value of the pure silver in a silver dollar.
\$0.90	\$0.696	\$1.04	\$0.804	\$1.18	\$0.913
.91	.704	1.05	.812	1.19	.920
.92	.712	1.06	.820	1.20	.928
.93	.719	1.07	.828	1.21	.936
.94	.727	1.08	.835	1.22	.944
.95	.735	1.09	.843	1.23	.951
.96	.740	1.10	.851	1.24	.959
.97	.750	1.11	.859	1.25	.967
.98	.758	1.12	.866	1.26	.975
.99	.766	1.13	.874	1.27	.982
1.00	.773	1.14	.882	1.28	.990
1.01	.781	1.15	.839	1.29	.998
1.02	.789	1.16	.897	*1.2929	1.00
1.03	.797	1.17	.905		

*Parity.

The exports of silver from London to India during the first nine months of the present calendar year, that is, from January 1, 1891, to October 8, 1891, were £3,093,626, against £6,591,156 in the same period of 1890, a falling off of £3,497,530 (\$17,020,730), over 50 per cent.

The exports of silver from London to India, China, and the Straits each year since 1881 have been as follows:

EXPORTS OF SILVER TO THE EAST.

Years.	India.	China.	Straits.	Total.
1881.....	\$12,375,612	\$3,898,860	\$3,577,729	\$19,852,201
1882.....	18,604,945	1,584,318	7,354,255	27,543,518
1883.....	18,040,140	4,212,574	11,189,631	33,442,345
1884.....	26,073,909	5,018,714	8,136,097	39,228,720
1885.....	30,913,667	3,160,315	3,108,146	37,182,128
1886.....	21,159,591	1,769,425	2,892,064	25,821,080
1887.....	19,798,328	1,427,179	2,766,946	23,992,453
1888.....	21,162,116	1,153,002	3,219,321	25,534,439
1889.....	28,392,786	2,731,861	8,181,141	39,305,788
1890.....	35,673,177	1,284,498	4,441,197	41,398,872
1891 (first nine months).....	15,032,258	670,857	6,896,526	22,599,641
Total.....	247,226,529	26,911,603	61,763,053	335,901,185

The net imports of silver into British India, and the amount of council bills sold, during the last seventeen English official years (ended March 31, of each year), have been as follows:

Years.	Net imports of silver.	Amount of council bills sold.	Years.	Net imports of silver.	Amount of council bills sold.
1874-75	\$22,580,560	\$52,760,715	1884-'85	35,282,125	66,946,731
1875-76	7,543,075	60,294,052	1885-'86	56,500,065	51,212,637
1876-77	35,038,800	61,784,106	1886-'87	34,844,140	54,296,577
1877-78	71,440,220	49,319,325	1887-'88	45,307,115	73,220,790
1878-79	19,320,005	67,880,692	1888-'89	45,000,525	69,218,337
1879-'80	38,299,355	74,271,598	1889-'90	43,798,500	76,890,700
1880-'81	18,930,685	74,163,888	1890-'91	51,928,717	77,713,304
1881-'82	26,181,770	89,604,086	Total	619,589,342	1,158,811,004
1882-'83	36,401,420	73,584,015	Annual average	36,446,431	68,105,353
1883-'84	31,194,265	85,649,451			

DISTRIBUTION OF SILVER DOLLARS.

The number of silver dollars distributed from the mints during the last fiscal year was 13,208,794, an increase of 1,784,925 over the preceding fiscal year.

The distribution during the fiscal year, and the number of silver dollars in the mints at the commencement and close of the year, are exhibited in the following table:

Period.	Philadelphia.	San Francisco.	New Orleans.	Carson.	Total.
In mints July 1, 1890	39,448,758	28,967,782	8,459,974	1,270,233	78,166,747
Coinage of the fiscal year	14,902,475	9,350,373	9,870,913	2,109,041	36,232,802
Total	54,351,233	38,338,155	18,330,887	3,379,274	114,399,549
In mints July 1, 1891	51,163,675	36,362,220	10,884,500	2,880,360	101,290,755
Distributed from mints	3,187,558	1,975,935	7,446,387	498,914	13,108,794

CIRCULATION OF SILVER DOLLARS.

The following comparative statement exhibits the total number of silver dollars coined, the number held by the Treasury for the redemption of certificates, the number held in excess of outstanding certificates, and the number in circulation, on November 1, of each of the last six years:

COINAGE, OWNERSHIP, AND CIRCULATION OF SILVER DOLLARS.

Date.	Total coinage.	In the Treasury.		In circulation.
		Held for payment of certificates outstanding.	Held in excess of certificates outstanding.	
Nov. 1, 1886	244,433,386	100,306,800	82,624,431	61,502,155
Nov. 1, 1887	277,110,157	160,713,957	53,461,575	62,934,625
Nov. 1, 1888	309,750,890	229,783,152	20,196,288	59,771,450
Nov. 1, 1889	343,638,001	277,319,944	6,219,577	60,098,480
Nov. 1, 1890	380,988,460	308,206,177	7,072,725	65,709,564
Nov. 1, 1891	400,475,368	321,142,642	26,197,265	62,135,461

SUBSIDIARY SILVER COINAGE.

The subsidiary silver coinage, during the last fiscal year, aggregated 18,560,371 pieces, of the nominal value of \$2,039,218.35, consisting of \$82,637.50 in half-dollars, \$195,118.75 in quarter-dollars, and \$1,761,462.10 in dimes.

Of this coinage, \$1,211,400 were manufactured from trade-dollar bullion and \$403.75 from purchased bullion.

As the act of March 3, 1891, directed that the trade-dollar bullion should be coined into silver dollars, whereas the act of March 3, 1887, providing for the redemption of the trade dollars, had left the recoinage into standard dollars or subsidiary coin discretionary with the Secretary, the use of this stock of silver for the coinage of subsidiary silver was discontinued.

Worn and uncurrent silver coin, mostly subsidiary pieces, were transferred from the Treasury to the mints for recoinage during the year of the nominal value of \$910,046.69.

Upon melting, these coins produced 692,575.67 ounces of standard silver, which would manufacture in subsidiary silver coins \$861,680.41, showing a loss of \$48,366.28, or about 5 per cent., of which sum \$19,851.55 was reimbursed the Treasury from the appropriation for recoinage of uncurrent gold and silver coin, contained in the sundry civil bill, approved August 30, 1890, and the balance, \$28,514.73, from the appropriation for recoinage contained in the act of March 3, 1891.

The stock of silver used for subsidiary coinage during the fiscal year is exhibited in the following table:

SILVER FOR SUBSIDIARY COINAGE, 1891.

Stock.	Mint at Philadelphia.		Mint at San Francisco.		Total.	
	Standard ounces.	Cost.	Standard ounces.	Cost.	Standard ounces.	Cost.
Silver bullion on hand July 1, 1890	2,302,404.45	\$2,645,942.34			2,302,404.45	\$2,645,942.34
Uncurrent coins transferred from Treasury ...	522,245.57	649,761.21	170,330.10	\$211,919.20	692,575.67	861,680.41
Melted assay coins purchased	136.58	169.92			136.58	169.93
Total stock	2,824,786.60	3,295,873.48	170,330.10	211,919.20	2,995,116.70	3,507,792.68
Used in coinage, fiscal year 1891	1,468,601.70	1,734,864.67	170,330.10	211,919.20	1,639,021.80	1,946,783.87
Trade-dollar bullion withdrawn from this account (act March 3, 1891)	1,326,751.50	1,524,828.61			1,326,751.50	1,524,828.61
Silver bullion on hand June 30, 1891	29,343.40	36,180.20			29,343.40	36,180.20

The seigniorage on the subsidiary silver coinage during the year was \$92,434.48, derived as follows:

From trade dollars melted	\$92,374.42
From silver bullion purchased	60.06
Total	\$92,434.48

In my last annual report attention was directed to the large stock—\$19,545,362.71—of subsidiary silver coins in the Treasury of the United States, which, through abrasion or mutilation, were unfit for circulation, or else of denominations for which there was no popular demand, and a recommendation made that authority be given to recoin the same into such denominations of subsidiary coins as there was a demand for, and that the loss of metal incident to such recoinage be paid from the profits which had been made on silver coinage.

Such a provision was inserted by the House of Representatives of the Fifty-first Congress in the sundry civil act for 1892, but the provision was stricken out in the Senate, and in lieu thereof an appropriation of \$150,000 was made for "recoinage of the uncurrent fractional silver coins, abraded below the limit of tolerance, in the Treasury."

Under this liberal appropriation a large amount of uncurrent silver coins in the Treasury have been recoined into dimes and quarter-dollars, and such recoinage is still in progress.

The nominal value of the silver coins transferred from the Treasury to the mints for recoinage from July 1, 1890 to November 1, 1891, has been \$4,277,917.74, upon which the loss of metal, representing the abrasion from wear, has been \$134,676.10 or an average of about 3 per cent. The actual coinage of the same into new silver coins has aggregated \$3,226,414.60.

It was estimated from previous recoinages that the loss would be about 5 per cent, and that the appropriation of \$150,000 would enable the Department to recoin about \$3,000,000. By careful and economical work the loss has been reduced considerably below this figure, and it is believed that the present appropriation will recoin nearly \$5,000,000.

The beneficial results of this appropriation are shown by the fact that the amount of subsidiary silver coin in the Treasury at the commencement of the last fiscal year, all of which was classed in Treasury statements as an "asset not available," was \$22,805,225, while the amount in the Treasury at the present date (November 1, 1891) is \$13,196,379, a reduction of \$7,608,846.

In view of the importance of relieving the Treasury of this incubus of uncurrent coin, as well as to provide change money in an attractive and desirable form, I renew the recommendation made in my previous report that either a permanent annual appropriation for recoinages be made, or that authority be given to reimburse the Treasurer for the loss of metal incident to the recoinage of silver coins, from the large profits which have been made by the Government in the first instance in the manufacture and issue of such coins. It seems to me that instead of depending upon the caprice of Congress for small annual appropriations for recoinage, that a permanent appropriation would be eminently proper and desirable. If, however, this does not meet with favor at the hands of Congress, I most urgently recommend an immediate appropriation of \$100,000 for continuing the recoinage of uncurrent silver coins in the Treasury.

TRADE-DOLLAR RECOINAGE.

The total number of trade dollars redeemed under the provisions of the act of March 3, 1887, was 7,689,036, containing 6,687,690.61 standard ounces of silver, of the coining value in silver dollars of \$7,782,040. From this there were coined up to the close of the fiscal year 1891, \$2,889,011 in subsidiary silver coins, containing 2,322,042.62 standard ounces, costing \$2,668,654.88. In addition there was transferred from

trade dollars remelted at the San Francisco mint to silver dollar bullion, 16.97 standard ounces, costing \$19.51, making the total disposed of up to June 1, 1891, 2,322,059.59 standard ounces, costing \$2,668,674.39, leaving on hand 4,365,631.12 standard ounces, costing \$5,020,361.61.

Of this amount there were stored, at the Philadelphia mint, 1,326,751.51 standard ounces, costing \$1,524,828.61, and, at the New Orleans, mint 3,038,879.61 standard ounces, costing \$3,495,533.

The act of March 3, 1891, directed the "Secretary of the Treasury shall, as soon as practicable, coin into standard silver dollars the trade-dollar bullion and trade dollars now in the Treasury, the expense thereof to be charged to the silver profit fund."

As soon as the mandatory coinage of silver dollars required by the act of July 14, 1890, ceased by limitation of law, the conversion of the trade-dollar bullion into standard silver dollars was commenced at the mints at Philadelphia and New Orleans.

The total number of silver dollars coined from trade-dollar bullion to November 1, 1891, has been \$3,260,100, upon which seignorage has been \$40,834.19. The coinage of trade-dollar bullion into standard silver dollars will be completed during the present calendar year.

The number of trade dollars redeemed under the act of March 3, 1887, the amount used in the subsidiary silver coinage to the close of the fiscal year ending June 30, 1891, and the uncoined balance on hand are exhibited in the following table:

TRADE DOLLARS RECOINED INTO SUBSIDIARY SILVER COIN.

Institutions.	1887.		1888.		1889.	
	Standard ounces.	Cost.	Standard ounces.	Cost.	Standard ounces.	Cost.
Trade dollars redeemed at Treasury and subtreasuries and transferred to—						
Mint at Philadelphia..	2,475,462.00	\$2,844,813.00	506,702.00 1,626.90	\$582,556.00 1,871.00		
Mint at San Francisco.	524,636.70	603,000.00	149,383.50	161,263.00		
Assay office at New York	12,781,877.21	3,200,000.00	257,002.40	295,533.00		
Total	5,781,975.91	6,647,813.00	905,714.80	1,041,223.00		
Recoined—						
Mint at Philadelphia..	206,563.75	237,386.32	338,378.75	386,897.88	181,200.37	\$150,785.90
Mint at San Francisco.	40,187.50	46,190.18	409,848.45	471,007.25	214,907.28	247,046.06
Mint at New Orleans..						
Transferred to silver-dollar bullion account, San Francisco					16.97	19.51
Total recoined	246,751.25	283,576.50	748,227.20	859,905.13	346,184.62	\$397,853.47

TRADE DOLLARS RECEIVED INTO SUBSIDIARY SILVER COIN—Continued.

Institutions.	1890.		1891.		Total.	
	Standard ounces.	Cost.	Standard ounces.	Cost.	Standard ounces.	Cost.
Trade dollars redeemed at Treasury and subtreasuries and transferred to—						
Mint at Philadelphia..					2,983,790.90	\$3,429,240.00
Mint at San Francisco..					665,020.20	764,263.00
Assay office at New York					*3,038,879.61	3,495,533.00
Total					6,687,690.71	7,689,036.00
Received—						
Mint at Philadelphia..	7,233.75	\$8,313.71	973,662.77	\$1,119,025.58	1,657,039.39	1,904,411.39
Mint at San Francisco..					665,003.23	764,243.49
Mint at New Orleans..						
Transferred to silver-dollar bullion account, San Francisco					16.97	19.51
Total received	7,233.75	8,313.71	973,662.77	1,119,025.58	2,322,059.59	2,668,674.39
Uncoined June 1, 1891—						
Mint at Philadelphia..					1,326,751.51	1,524,828.61
Mint at New Orleans ..					3,038,879.61	3,495,533.00
Total					4,365,631.12	5,020,361.61

* Transferred from mint at New Orleans.

† Transferred to the mint at New Orleans.

The following table exhibits the amount of trade-dollar bullion coined, the cost of same, number of dollars coined therefrom and the seigniorage thereon, under act of March 3, 1891, at the mints at Philadelphia and New Orleans, to November 1, 1891:

COINAGE OF SILVER DOLLARS FROM TRADE-DOLLAR BULLION.

MINT AT PHILADELPHIA.

Months.	Coined.		Sold in sweeps.		Total employment.		Dollars coined.	Seigniorage.
	Standard ounces.	Cost.	Standard ounces.	Cost.	Standard ounces.	Cost.		
1891.								
June								
July	300,781.25	\$345,686.33			300,781.25	\$345,686.33	\$350,000	\$4,313.67
August	429,687.50	493,837.61			429,687.50	493,837.61	500,000	6,162.39
September	171,960.94	197,633.81			171,960.94	197,633.81	200,100	2,406.19
October	214,843.75	246,918.80			214,843.75	246,918.80	250,000	3,081.20
Total	1,117,273.44	1,284,076.55			1,117,273.44	1,284,076.55	1,300,100	16,923.45

MINT AT NEW ORLEANS.

1891.								
June	171,875.00	\$197,702.71			171,875.00	\$197,702.71	\$200,000	\$2,297.29
July	429,687.50	494,256.77			429,687.50	494,256.77	500,000	5,743.23
August	481,250.00	553,567.58			481,250.00	553,567.58	560,000	6,432.42
September	343,750.00	395,405.42	570.19	\$653.87	344,320.19	396,061.29	400,000	4,594.58
October	429,687.50	494,256.78			429,687.50	494,256.78	500,000	5,743.22
Total	1,856,250.00	2,135,180.26	570.19	653.87	1,856,820.19	2,135,845.13	2,100,000	24,810.74
Grand total	2,973,523.44	3,429,265.81	570.19	653.87	2,974,093.63	3,419,921.68	3,460,100	40,834.19

SEIGNIORAGE ON SILVER.

The balance of silver profits on hand, at the four coinage mints, at the commencement of the fiscal year, was \$302,659.51.

The seigniorage on the coinage of silver dollars during the fiscal year aggregated \$6,221,333.42, and on subsidiary silver coinage \$92,434.48, a total of \$6,313,767.90.

From the gross seigniorage there was paid for the transportation of silver coins the sum of \$52,904.16, and for reimbursement of wastage and loss on sale of sweeps \$6,530.90, a total of \$59,435.06, leaving as the net seigniorage for the year the sum of \$6,254,332.84.

The total amount of seigniorage covered into the Treasury during the fiscal year aggregated \$6,404,677, leaving on hand in the coinage mints at the close of the year the sum of \$152,315.35.

The net profit on the coinage of silver during the thirteen years ended June 30, 1891, including the balance in the coinage mints on July 1, 1878, has aggregated \$71,952,390.25.

In the Appendix will be found the usual tables showing the seigniorage on the coinage of silver dollars and subsidiary silver separately, and the distribution of the profits.

A table will also be found exhibiting the expenditures from silver profits on account of distribution of silver coins.

MINOR COINAGE.

During the fiscal year 63,340,550 minor coin pieces were struck at the mint at Philadelphia, of the face value of \$1,166,936.50, as follows :

MINOR COINAGE, 1891.

Denominations.	Pieces.	Value.
Five-cent nickel	13, 338, 275	\$666, 913. 75
One-cent bronze	50, 002, 275	500, 022. 75
Total	63, 340, 550	1, 166, 936. 50

The amount and cost of blanks purchased for minor coinage during the year was as follows :

Blanks purchased.	Pounds avoirdupois.	Cost.
One-cent bronze blanks	339, 500	\$67, 096. 30
Five-cent nickel blanks	143, 000	46, 444. 20
Total	482, 500	114, 140. 50

The demand for minor coins has been pressing, taxing to the utmost the capacity of the mint at Philadelphia, but there has been no delay upon the part of the mint in supplying such coins. The blanks used in the manufacture of these pieces were purchased, ready for striking, under contract, the rate paid being \$0.1995 per pound for the one-cent blanks and \$0.3194 for the five-cent nickels.

No recoining of minor coinage metal was executed during the year.

The accompanying statement shows the balance of coinage metal on hand at the commencement of the year, the amount transferred, and the cost of metal necessary to recoin the same and the loss in melting.

MINOR COINAGE METAL.

Character.	Amount.
Balance on hand July 1, 1890.....	\$28,012.46
Transferred to mint by Treasurer of United States	34,049.00
In order to make the proper alloy for the recoinage of the 1-cent nickel coins into 5-cent nickel coins, it was necessary to add new nickel, costing	334.21
In order to make the proper alloy for the recoinage of the old copper cents into bronze 1-cent coins, it was necessary to add tin and zinc, costing.....	10.12
In order to recoin the 3-cent nickel coins into 5-cent nickel coins it was necessary to add metal of the same alloy, costing.....	255.76
Making the total amount available for recoinage.....	62,061.55
Deduct from same wastage for the year.....	1,186.71
Leaving the net amount available, at the close of the year, June 30, 1891, for recoinage, to be	61,474.84

The following table exhibits the distribution of minor coins during the fiscal year 1891:

MINOR COINS DISTRIBUTED FROM THE MINT AT PHILADELPHIA DURING THE FISCAL YEAR 1891.

State or Territory.	5-cent nickel.	1-cent bronze.	State or Territory.	5-cent nickel.	1-cent bronze.
Alabama	\$9,375	\$1,890	Nebraska	\$14,395	\$5,819
Arizona	540	60	New Hampshire	4,525	3,785
Arkansas	2,120	240	New Jersey	22,290	16,345
California	10,440	760	New Mexico Territory	940	.....
Colorado	5,345	1,040	New York	82,195	105,630
Connecticut	14,450	8,980	North Carolina	11,445	4,760
Delaware	4,450	2,940	North Dakota	650	650
District of Columbia	100	340	Ohio	43,610	30,460
Florida	4,560	1,410	Oklahoma Territory	220	20
Georgia	17,975	7,325	Oregon	4,810	100
Idaho	140	.....	Pennsylvania	86,687	48,060
Illinois	86,125	68,950	Rhode Island	9,300	9,450
Indian Territory	220	.....	South Carolina	11,100	3,090
Indiana	18,685	12,165	South Dakota	1,985	1,015
Iowa	31,700	14,050	Tennessee	14,920	4,740
Kansas	10,725	7,870	Texas	36,965	1,300
Kentucky	29,755	9,630	Utah Territory	1,960	25
Louisiana	13,180	80	Vermont	3,720	2,800
Maine	4,340	4,030	Virginia	21,320	7,400
Maryland	11,875	5,745	Washington	8,405	395
Massachusetts	27,590	36,020	West Virginia	4,610	2,100
Michigan	25,480	17,310	Wisconsin	22,175	17,290
Minnesota	10,875	12,325	Wyoming	500	.....
Mississippi	2,970	345	Total	\$789,150	\$488,874
Missouri	22,475	9,000			
Montana	4,940	1,105			

The several types and denominations of minor coins issued by the Philadelphia Mint since its establishment, the amount remelted by the mint, and the amount apparently outstanding June 30, 1891, are set forth in the following table:

Denominations.	Coined.	Remelted.	Outstanding June 30, 1891.
Copper cents.....	\$1,562,887.44	\$376,300.44	\$1,186,587.10
Copper half-cents*.....	39,926.11		
Copper nickel cents.....	2,007,720.00	763,782.78	1,243,937.22
Bronze cents.....	6,172,897.17	39,871.73	6,133,025.44
Bronze 2-cent pieces.....	912,020.00	318,926.83	593,093.18
Nickel 3-cent pieces.....	905,768.52	230,684.74	675,083.78
Nickel 5-cent pieces.....	11,545,234.55	111,145.60	11,434,088.95
Total.....	23,146,443.79	1,840,712.11	21,305,731.68

* There is no record of the melting of any old copper half-cents, but it is believed that few, if any, are in circulation.

APPROPRIATIONS AND EXPENDITURES.

The amounts specifically appropriated by Congress for the support of the mints and assay offices of the United States for the fiscal year ended June 30, 1891, aggregated \$1,030,351.50, against \$1,094,650 appropriated for the preceding fiscal year.

From specific appropriations there was expended \$1,022,806.28, leaving unexpended \$7,545.22.

In addition, there was expended at the four coinage mints from the general appropriations contained in the act of February 28, 1878, and July 14, 1890, the sum of \$312,191.72.

There was also expended from the latter appropriations at the Treasury Department the sum of \$912 for cablegrams from London giving the daily price of silver.

The total expenditures, therefore, for the mint service for the last fiscal year aggregated \$1,335,910.

The appropriations and expenditures for the mint service, exclusive of the amount paid by the Treasury Department for cablegrams, are exhibited in the following table:

APPROPRIATIONS AND EXPENDITURES, 1891.

APPROPRIATIONS.

Institutions.	Salaries.	Wages.	Contingent.	Appropriation for the coinage of the standard silver dollar, act February 28, 1878.	Appropriation for the coinage of silver bullion, act July 14, 1890.	Total.
MINTS.						
Philadelphia.....	\$41,550.00	\$293,000.00	\$80,000.00			\$414,550.00
San Francisco.....	41,100.00	170,000.00	40,000.00			251,100.00
Carson.....	29,550.00	30,000.00	12,500.00			72,050.00
New Orleans.....	31,950.00	74,000.00	35,000.00			140,950.00
ASSAY OFFICES.						
New York.....	39,250.00	25,000.00	10,000.00			74,250.00
Denver.....	10,950.00	13,750.00	6,000.00			30,700.00
Helena.....	7,700.00	12,701.50	5,000.00			25,401.50
Boisé City.....	3,200.00		7,500.00			10,700.00
Charlotte.....	2,750.00		2,000.00			4,750.00
St. Louis.....	3,500.00		2,400.00			5,900.00
Total.....	211,500.00	618,451.50	200,400.00			1,030,351.50

APPROPRIATIONS AND EXPENDITURES, 1891—Continued.

EXPENDITURES.

Institutions.	Salaries.	Wages.	Contingent.	Appropriation for the coinage of the standard silver dollar, act February 28, 1878.	Appropriation for the coinage of silver bullion, act July 14, 1890.	Total.
MINTS.						
Philadelphia.....	\$41,364.56	\$292,987.02	\$79,790.27	\$11,682.84	\$126,519.20	\$552,343.89
San Francisco.....	41,100.00	169,987.88	39,430.39	204.00	48,862.44	299,585.31
Carson.....	29,550.00	30,000.00	11,905.28	33,103.76	30,297.65	134,956.69
New Orleans.....	31,808.77	73,993.21	33,840.55	39,609.70	21,811.53	201,163.76
ASSAY OFFICES.						
New York.....	39,250.00	24,636.75	10,000.00			73,886.75
Denver.....	10,950.00	13,706.25	2,431.48			27,087.73
Helena.....	7,571.75	12,587.00	4,478.07			24,636.82
Boise City.....	3,200.00		7,487.90			10,687.90
Charlotte.....	2,750.00		1,999.76			4,749.76
St. Louis.....	3,500.00		2,399.39			5,899.39
Total.....	211,145.08	617,898.11	193,763.09	84,000.90	227,590.82	1,334,998.00

The unexpended balances of appropriations for the fiscal year 1891 are shown in detail in the following table:

UNEXPENDED BALANCES OF APPROPRIATIONS, FISCAL YEAR 1891.

Institutions.	Salaries.	Wages.	Contingent expenses.	Total.
MINTS.				
Philadelphia.....	\$185.44	\$12.98	\$209.73	\$408.15
San Francisco.....		12.12	569.61	581.73
Carson.....			594.72	594.72
New Orleans.....	41.23	0.79	1,159.45	1,207.47
ASSAY OFFICES.				
New York.....		63.25		63.25
Denver.....		43.75	3,568.52	3,612.27
Helena.....	128.25	114.50	521.93	764.68
Boise City.....			12.10	12.10
Charlotte.....			.24	.24
St. Louis.....			.61	.61
Total.....	354.92	553.39	6,636.91	7,545.22

The expenses of the office of the Director of the Mint, embracing the salaries of the Director and clerical force, the examination of mints and assay offices, the purchase of books and periodicals, the maintenance of the laboratory, the expenses of collecting and compiling the statistics of the precious metals, and all incidental and contingent expenses, aggregated \$34,636.90, leaving unexpended of appropriations for these purposes \$2,073.10.

The appropriations and expenditures were as follows:

APPROPRIATIONS AND EXPENSES OF THE OFFICE OF THE DIRECTOR OF THE MINT
FOR THE FISCAL YEAR 1891.

Purposes for which appropriated.	Appropriated.	Expended.	Unexpended.
Salaries.....	\$28,900.00	\$28,164.08	\$735.92
Examination of mints.....	2,500.00	1,560.18	939.82
Mining statistics.....	4,000.00	3,666.95	333.05
Laboratory.....	750.00	723.00	27.00
Books, pamphlets, and incidental expenses.....	500.00	492.69	7.31
Total.....	36,710.00	34,636.90	2,073.10

The appropriations made for the support of the mints and assay offices for the fiscal year to end June 30, 1892, are as follows:

APPROPRIATIONS FOR MINTS AND ASSAY OFFICES, 1892/

Institutions.	Salaries.	Wages of workmen.	Contingent expenses.	Total.
MINTS.				
Philadelphia.....	\$41,550.00	\$293,000.00	\$80,000.00	\$414,550.00
San Francisco.....	41,100.00	170,000.00	40,000.00	251,100.00
Carson.....	29,550.00	60,000.00	25,000.00	114,550.00
New Orleans.....	31,950.00	74,000.00	35,000.00	140,950.00
ASSAY OFFICES.				
New York.....	39,250.00	30,000.00	10,000.00	79,250.00
Denver.....	10,950.00	13,750.00	6,000.00	30,700.00
Helena.....	7,700.00	12,700.00	5,000.00	25,400.00
Boisé City.....	3,200.00	.....	9,000.00	12,200.00
Charlotte.....	2,750.00	.....	2,500.00	5,250.00
St. Louis.....	3,500.00	.....	2,400.00	5,900.00
Total.....	211,500.00	653,450.00	214,900.00	1,079,850.00

On the 23th of September, 1891, I had the honor to submit for your consideration estimates of appropriations required for the support of the mint service for the fiscal year ended June 30, 1893.

These estimates, including the usual appropriation for "freight on bullion and coin," aggregated \$1,126,711.50, against appropriations for the same purposes for the current fiscal year aggregating \$1,126,761.50, a slight reduction.

EARNINGS AND EXPENSES OF THE REFINERIES OF THE COINAGE
MINTS AND ASSAY OFFICE AT NEW YORK.

The amount collected from depositors during the fiscal year 1891 at the coinage mints and assay office at New York, as charges for parting and refining bullion, was \$199,946.79.

The law requires that the charges collected of depositors shall be used to defray the expenses of the operations of the refinery.

The total amount expended was \$215,767.63.

There was realized, however, during the year, from the sale of by-products from the refinery (blue vitriol and spent acid) the sum of \$19,480.42,

a legitimate gain to the refinery, which gains prior to the fiscal year 1885 were used in offsetting payments for acids.

Since that date, under a decision of the First Comptroller, the proceeds of the sale of blue vitriol and spent acids, the by-products of the acid refinery, have not been available for reducing the expenses of the refinery, but are covered into the Treasury as a miscellaneous receipt.

Deducting from the gross expenditures the amount realized from the sale of these by-products, the *net* expenditures for parting and refining bullion were \$196,287.14, or \$3,659.65 less than the charges collected.

In my fiscal report attention was directed to the advisability of changing existing law, as construed by the accounting officers of the Department, so as to permit the use of moneys arising from the sale of refinery by-products in reducing the expenses of the refineries.

The purpose of the law was to make the refineries self-supporting, and this purpose is partly defeated by diverting legitimate gains, which in any metallurgical establishment would be used to offset losses and expenses.

Under a separate heading in this report I invite attention to the propriety and advisability of changing the law in this respect.

The total receipts for parting and refining bullion since July 1, 1876, the date at which the refineries were made self-supporting, have exceeded the *gross* expenditures for the same period by the sum of \$114,727.02, the latter amount standing to the credit of the appropriation for parting and refining bullion on July 1, 1891.

The receipts and expenses of the refineries for the fiscal year 1891 are exhibited in the following table:

CHARGES COLLECTED AND EXPENDITURES FOR PARTING AND REFINING BULLION, 1891.

Institutions.	Charges collected.	Gross expenditures.	Net expenditures.
Mint at Philadelphia	\$18,510.74	\$19,419.83	\$19,419.83
Mint at San Francisco	49,492.63	64,987.08	63,916.40
Mint at Carson	37,990.28	35,735.92	31,661.92
Mint at New Orleans	772.17	312.70	312.03
Assay office at New York	93,210.97	95,312.10	80,976.36
Total	199,946.79	215,767.63	196,287.14

EARNINGS AND EXPENSES OF THE MINTS AND ASSAY OFFICES.

The total earnings of the mints and assay offices during the last fiscal year aggregated \$7,650,529.62, of which \$6,221,333.42 arose from seigniorage on the coinage of silver dollars, \$92,434.48 from seigniorage on subsidiary silver coins, and \$1,050,144.31 from seigniorage on minor coinage.

The remainder of the earnings were derived from charges collected from deposits, profits on the sale of medals and proof coins, from surplus bullion returned by the operative officers and recovered from the deposit melting room, and from the sale of old material and by-products.

The total expenditures and losses of all kinds, including the entire expenses for the support of the mints and assay offices and the acid refineries, the wastage of the operative departments and losses on the sale of sweeps, the expenses of distributing silver dollars, subsidiary

silver, and minor coins, aggregated \$1,661,139.83, leaving a net profit of earnings over expenditures for the fiscal year of **\$5,989,389.79**.

In the appendix will be found the usual table exhibiting in detail the earnings and expenditures under each classification and at each institution.

CLASSIFIED STATEMENT OF EXPENDITURES.

The following table exhibits the expenditures for the different classes of supplies (as well as for salaries and wages) at the institutions comprising the mint service during the fiscal year 1891, the expenses of the acid refineries being separated from the ordinary expenses of the mints.

STATEMENT OF EXPENDITURES FOR SUPPLIES AT THE MINTS AND ASSAY OFFICES OF THE UNITED STATES FOR THE FISCAL YEAR ENDING JUNE 30, 1891.

Supplies.	Ordinary.	Refinery.	Total.
Acids.....	\$1,965.09	\$47,272.86	\$49,237.95
Advertising	348.33	.....	348.33
Adjusting and repair of balances.....	233.00	.....	233.00
Assayer's materials.....	1,239.83	.....	1,239.83
Barrels and tierces.....	.....	1,037.45	1,037.45
Belting	1,010.55	36.87	1,053.42
Brick, fire.....	.....	228.52	228.52
Bullion balance.....	1,800.00	.....	1,800.00
Charcoal.....	5,650.66	2,195.10	7,845.76
Chemicals	5,242.38	425.40	5,677.78
Coal.....	17,858.49	8,129.86	25,988.35
Coke.....	5,508.62	279.53	5,848.15
Copper.....	27,841.00	16,258.91	44,099.91
Crucibles	6,654.86	3,440.48	10,095.34
Dry goods	2,111.18	1,726.94	3,838.12
Electric motor.....	865.15	.....	865.15
Flags.....	10.00	.....	10.00
Fluxes.....	137.80	2,736.06	2,874.46
Freight and drayage.....	3,484.79	2,503.25	5,988.14
Gas and electric lighting.....	15,593.18	2,005.12	17,513.30
Gas furnaces	112.50	347.50	460.00
Gloves and gauntlets	10,020.53	834.90	10,861.43
Hardware.....	4,555.66	1,680.31	6,244.97
Ice	3,246.92	325.53	3,572.45
Iron and steel.....	1,733.61	127.14	1,860.75
Labor and repairs.....	10,745.20	3,953.29	14,698.49
Loss on sale of sweeps.....	534.26	674.96	1,209.22
Lumber.....	3,438.22	946.52	4,384.74
Machinery and appliances.....	21,729.91	755.01	22,484.92
Metal work and castings	4,781.39	1,409.68	6,191.07
Oils.....	1,836.29	532.25	2,368.54
Rent.....	480.00	.....	480.00
Salt.....	7.05	681.71	688.76
Sewing	2,573.37	985.65	3,559.02
Stationery, printing, and binding	2,110.60	.....	2,110.60
Steam.....	862.60	6,815.51	7,678.20
Sundries.....	42,606.92	1,917.94	44,584.86
Telegraphing and telephone service.....	441.42	.....	441.42
Tools.....	229.81	.....	229.81

STATEMENT OF EXPENDITURES FOR SUPPLIES AT THE MINTS AND ASSAY OFFICES OF THE UNITED STATES, ETC.—Continued.

Supplies.	Ordinary.	Refinery.	Total.
Water.....	\$4,813.34	\$700.25	\$5,513.59
Washing.....	1,400.31	60.00	1,520.31
Wood.....	15,117.14	976.68	16,093.82
Tin.....		3,784.61	3,784.61
Lead.....	236.64	855.02	1,091.66
Total.....	230,875.78	116,480.67	347,356.45
Salaries.....	211,145.08		211,145.08
Wages of workmen.....	892,577.14	99,286.96	992,264.10
Aggregate.....	1,334,998.00	215,767.63	1,550,765.63

MOVEMENT OF GOLD FROM THE UNITED STATES.

In the report of this Bureau for the fiscal year 1889, attention was directed to the heavy export of gold from the United States, commencing in May, 1888, and continuing, with some interruption, to the end of July, 1889, aggregating \$61,435,989.

In considering this movement it was mentioned that in addition to the bars consigned directly to France, the bulk of the other gold shipments were intended for the Bank of France, and the causes which seemed to operate in producing this drain of gold were enumerated, among others the large expenditures by Americans at the Paris Exposition.

In the summer of 1890 a movement of gold from this country occurred, which, while by no means as serious in amount as its predecessor, was somewhat remarkable as a monetary transaction, considering the low rate of sight sterling exchange which obtained during the period.

This movement aggregated in a period of less than two months the sum of \$15,672,982.

In February of the present year another movement of gold to Europe commenced which did not cease until near the close of July, exceeding in amount the exports of the fiscal year 1889, and causing by far the most serious loss of gold which this country has sustained for many years.

The total amount exported from the port of New York was \$70,223,494.31.

The following table, which has been prepared with great care and research by the superintendent of the assay office at New York, exhibits the dates and value of the shipments, the names of the shippers, and the destination of the specie, and prevailing rates of sterling exchange:

GOLD BARS AND GOLD COIN SHIPPED FROM THE PORT OF NEW YORK TO EUROPE FROM FEBRUARY 13 TO JULY 24, 1891.

Date.	Name of shipper.	Value.	Rate of exchange.	Destination.
UNITED STATES ASSAY OFFICE BARS.				
Feb. 11	Lazard Frères.....	\$1,027,378.57	4.88-4.88½	Germany.
13	Heidelbach, Ickelheimer & Co.....	762,709.13	4.88-4.88½	Do.
29	.....do.....	601,830.72	4.87-4.87½	Do.
27	.....do.....	692,611.48	4.87-4.87½	Do.
Mar. 5	.....do.....	601,622.41	4.88½	Do.
	Total United States Assay Office bars...	3,596,152.31		

GOLD BARS AND GOLD COIN SHIPPED FROM THE PORT OF NEW YORK TO EUROPE,
ETC.—Continued.

Date.	Name of shipper.	Value.	Rate of exchange.	Destination.
UNITED STATES COIN.				
Mar. 21	Lazard Frères	\$500,000.00	4.88½	France.
	.....do	1,000,000.00	4.88½	Germany.
21	Heidelbach, Ickelheimer & Co	1,278,000.00	4.88½	Do.
27	Lazard Frères	700,000.00	4.88½-4.88½	France.
Apr. 4	.....do	800,000.00	4.88½	Do.
4	Ladenburg, Thalman & Co	500,000.00	4.88½	Germany.
8	Heidelbach, Ickelheimer & Co	1,001,500.00	4.88½-4.88½	Do.
8	A. Belmont & Co	300,000.00	4.88½-4.88½	Do.
11	Ladenburg, Thalman & Co	500,000.00	4.88½	Do.
11	Heidelbach, Ickelheimer & Co	500,000.00	4.88½	Do.
11	L. Von Hoffmann & Co	500,000.00	4.88½	Do.
11	Kidder, Peabody & Co	250,000.00	4.88½	Do.
11	Lazard Frères	500,000.00	4.88½	Do.
11	.....do	500,000.00	4.88½	France.
18	Ladenburg, Thalman & Co	500,000.00	4.88½	Germany.
18	L. Von Hoffman & Co	500,000.00	4.88½	Do.
18	Heidelbach, Ickelheimer & Co	100,000.00	4.88½	Do.
18	Kidder, Peabody & Co	1,000,000.00	4.88½	Do.
18	Lazard Frères	1,150,000.00	4.88½	France.
25	L. Von Hoffman & Co	500,000.00	4.88½	Germany.
25	A. Belmont & Co	500,000.00	4.88½	Do.
25	Kidder, Peabody & Co	500,000.00	4.88½	Do.
28	Lazard Frères	1,800,000.00	4.89	France.
29	.....do	700,000.00	4.89	England.
29	L. Von Hoffman & Co	500,000.00	4.89	Do.
29	Kessler & Co	250,000.00	4.89	Do.
29	Heidelbach Ickelheimer & Co	500,000.00	4.89	Do.
29	A. Belmont & Co	500,000.00	4.89	Do.
May 2	Lazard Frères	500,000.00	4.88½	Do.
2	.....do	1,400,000.00	4.88½	France.
6	Baring, Magoun & Co	1,000,000.00	4.88½-4.89	England.
6	A. Belmont & Co	500,000.00	4.88½-4.89	Do.
6	Heidelbach, Ickelheimer & Co	500,000.00	4.88½-4.89	Do.
6	Lazard Frères	650,000.00	4.88½-4.89	Do.
6	L. Von Hoffman & Co	500,000.00	4.88½-4.89	Do.
9	Baring, Magoun & Co	800,000.00	4.88½	Do.
9	A. Belmont & Co	500,000.00	4.88½	Do.
9	L. Von Hoffman & Co	500,000.00	4.88½	Do.
9	Kuhn, Loeb & Co	500,000.00	4.88½	Do.
9	Lazard Frères	500,000.00	4.88½	Do.
9	.....do	1,150,000.00	4.88½	France.
12	Heidelbach, Ickelheimer & Co	500,000.00	4.88½	England.
13	.....do	500,000.00	4.88½-4.88½	Do.
13	Lazard Frères	750,000.00	4.88½-4.88½	Do.
14	.....do	750,000.00	4.88	Do.
14	L. Von Hoffman & Co	1,000,000.00	4.88	Do.
14	Ladenburg, Thalman & Co	500,000.00	4.88	Do.
16	.....do	500,000.00	4.88½	Do.
16	Lazard Frères	1,250,000.00	4.88½	Do.
16	L. Von Hoffmann & Co	1,000,000.00	4.88½	Do.
16	Heidelbach, Ickelheimer & Co	500,000.00	4.88½	Do.
16	.....do	500,000.00	5.88½	France.
20	Baring, Magoun & Co	1,000,000.00	4.87½	England.
20	Lazard Frères	750,000.00	4.87½	Do.

REPORT OF THE SECRETARY OF THE TREASURY. 183

GOLD BARS AND GOLD COIN SHIPPED FROM THE PORT OF NEW YORK TO EUROPE, ETC.—Continued.

Date.	Name of shipper.	Value.	Date of exchange.	Destination.
UNITED STATES COIN—continued.				
May 20	Ladenburg, Thalmann & Co	\$500,000.00	4.87½	England.
20	Brown Bros. & Co	750,000.00	4.87½	Do.
20	L. Von Hoffman & Co	250,000.00	4.87½	Do.
20	Heidelbach, Ickelheimer & Co	970,000.00	4.87½	Do.
23	Baring, Magoun & Co	1,000,000.00	4.87½	Do.
23	L. Von Hoffman & Co	300,000.00	4.87½	Do.
23	Lazard Frères	1,000,000.00	4.87½	Do.
23	Heidelbach, Ickelheimer & Co	500,000.00	4.87½	France.
27	Kuhn, Loeb & Co	500,000.00	4.88½	England.
27	Baring, Magoun & Co	250,000.00	4.88½	Do.
27	Ladenburg, Thalmann & Co	500,000.00	4.88½	Do.
27	L. Von Hoffmann & Co	500,000.00	4.88½	Do.
30	do	350,000.00	4.88½-4.88½	Do.
30	Lazard Frères	750,000.00	4.88½-4.88½	Do.
30	do	1,250,000.00	4.88½-4.88½	France.
30	Heidelbach, Ickelheimer & Co	500,000.00	4.88½-4.88½	Do.
June 2	Lazard Frères	1,000,000.00	4.88½	England.
3	do	750,000.00	4.88½-4.88½	Do.
3	Baring, Magoun & Co	500,000.00	4.88½-4.88½	Do.
3	L. Von Hoffman & Co	500,000.00	4.88½-4.88½	Do.
3	Heidelbach, Ickelheimer & Co	500,000.00	4.88½-4.88½	Do.
4	do	800,000.00	4.88½	Do.
4	Kuhn, Loeb & Co	500,000.00	4.88½	Do.
6	do	500,000.00	4.87½	Do.
6	Lazard Frères	500,000.00	4.87½	Do.
6	do	1,000,000.00	4.87½	France.
9	A. Belmont & Co	500,000.00	4.87½	England.
19	Lazard Frères	1,250,000.00	4.88½-4.88½	Do.
19	do	1,250,000.00	4.88½-4.88½	France.
22	do	800,000.00	4.88½-4.88½	England.
24	Heidelbach, Ickelheimer & Co	500,000.00	4.88½	Germany.
26	do	500,000.00	4.88½-4.88½	Do.
26	L. Von Hoffmann & Co	750,000.00	4.88½-4.88½	Do.
28	Ladenburg, Thalmann & Co	750,000.00	4.88½-4.88½	Do.
28	Lazard Frères	1,000,000.00	4.88½-4.88½	England.
28	do	1,250,000.00	4.88½-4.88½	France.
30	do	500,000.00	4.88½	England.
30	Ladenburg, Thalmann & Co	500,000.00	4.88½	Germany.
July 1	Heidelbach, Ickelheimer & Co	200,000.00	4.87½-4.87½	Do.
3	Lazard Frères	500,000.00	4.87½-4.87½	England.
3	do	1,100,000.00	4.87½-4.87½	France.
6	do	500,000.00	4.87-4.87½	England.
17	Heidelbach, Ickelheimer & Co	300,000.00	4.86½-4.86½	Germany.
20	Lazard Frères	600,000.00	4.86½-4.87	England.
24	do	500,000.00	4.86½	Do.
24	do	1,000,000.00	4.86½	France.
Total coin		66,399,505.00		
Add United States Assay Office bars		3,596,152.31		
Total		69,995,657.31		
May —	Lazard Frères (Selby bars)	227,837.00		
Grand total		70,223,494.31		

An examination of the above table discloses the very singular fact that of this large amount all but \$9,300,000 was shipped when the rate of sterling exchange was below the point (about \$4.886) at which gold shipments can be made without loss. The movement, therefore, must have been artificially stimulated by banks and bankers in Europe paying a premium on gold or making discounts to bill-drawers for cash remittances.

This was the result of a condition of affairs very unusual in the mercantile world.

Ordinarily, large banking houses in New York, at certain seasons, can draw on correspondents in the financial centers of Europe sight and time exchange to a large amount in advance of expected commercial bills drawn against shipments of produce, etc.

The heavy losses incurred by European capitalists in South American countries, and the resulting financial disturbances and uneasiness produced thereby, not only greatly restricted this credit, but led to a continuous pressure, more or less strong, for gold to strengthen the reserves of the banks in England, France, and Germany.

For reasons connected with loan difficulties, Russia at the same time withdrew from the depositories of Western Europe large quantities of gold, thus adding greatly to the drain and increasing the pressure for the import of gold from the United States, this country being the only outside source from which gold in large amounts could be readily drawn.

The usual encouragement to the import of gold by the banks of Paris and Berlin in giving credit to importers for money on the day of shipment from New York, was, of course, in operation.

It is a well-known fact that the Bank of England paid a premium for American gold coin, and increased that premium from time to time as the financial crisis grew more threatening.

The rate of interest for money being above the normal price in Europe, investments in American securities were discouraged. Indeed, large amounts of the latter were returned in exchange for gold, some holders being doubtless influenced by the fear of the advent of a silver standard here.

The amount of silver exported was also greatly reduced by the increased monthly purchases by this Government, and gold took its place.

The relative amounts of exports and imports of produce and merchandise generally were such as to make our indebtedness larger than usual.

The gold carried out of the country to meet the expenses, by sea and land, of Americans spending their summers abroad, must have nearly if not quite equaled the year of the Paris Exposition, when such expenditures were estimated at over \$92,000,000.

The balance of trade, for these reasons, being against us, and the pressing need for gold in London, Paris, and Berlin, account very largely for the very heavy exports of gold during these five months.

Desultory quantities of gold were returned to this country from Europe in the month of July of the present year, but by September the return movement was well under way and has continued to the present time. The following table exhibits the importations of gold (over half our own coin returned), from July 1 to November 1, 1891:

REPORT OF THE SECRETARY OF THE TREASURY. 185

IMPORTS OF GOLD COIN AND GOLD BULLION AT NEW YORK FROM JULY 1, 1891, TO OCTOBER 31, 1891.

Month.	Country.	United States coin.	Foreign coin.	Foreign bullion.	Total.
July	England		\$267,658.00		\$267,658.00
	France		120,625.00		120,625.00
	Germany		306,590.00	\$13.00	306,603.00
September	England		339,825.00		339,825.00
	France	\$2,614,200.00	935,980.00		3,550,180.00
	Germany	976,225.00	1,032,745.00	48,065.00	2,057,035.00
October	England	4,144,417.00	3,108,901.00	880,445.00	8,129,853.00
	France	3,323,430.00	439,243.00	*1,549,081.00	5,311,754.00
	Germany	511,200.00	243,325.00	34,572.00	789,097.00
Total		11,569,472.00	6,794,982.00	2,498,776.00	20,863,230.00
During the same period there were received at the port of New York the following amounts of gold coin and bullion from Mexico, Central and South America, and the West Indies, viz :					
Total		939,886.00	187,941.00	333,316.00	1,460,543.00
Grand total		12,509,358.00	6,982,923.00	2,832,092.00	22,324,773.00

* Includes \$20,967.07 United States assay office bars.

With the return of confidence in Europe, investors and others there have bought heavily in American securities, and these investments, together with the large exports of breadstuffs and other materials from the United States this fall and winter, must necessitate additional shipments of gold to this country, and it is believed that the movement of specie to our shores now in progress will continue, with some interruptions, for some months yet and in increasing amounts.

IMPORTS AND EXPORTS OF THE PRECIOUS METALS.

Gold.—The value of the gold bullion imported into the United States during the fiscal year 1891—all foreign gold—was \$2,105,034, of which \$1,073,243 came from Mexico, \$399,472 from British Columbia, \$324,010 from Colombia, \$145,995 from Great Britain, and the remainder from countries of Central America and South America.

Gold was contained in imported silver-lead ores of the value of \$68,742.

Foreign gold ores, of the invoiced value of \$214,803, were imported into the United States for reduction, all except a small amount coming from Mexico.

Foreign gold coins were imported of the value of \$13,303,387, of which \$5,851,526 were from Australia, \$2,447,901 from Great Britain, \$2,375,133 from Cuba, \$1,410,385 from Germany, \$472,850 from France, \$328,208 from San Domingo, \$154,592 from Mexico, and the remainder from various countries.

United States gold coins were returned to this country during the year of the value of \$2,824,146.

The total imports of gold into the United States during the fiscal year may be summed up as follows:

GOLD IMPORTS, 1891.

Items.	Amount.
Foreign bullion.....	\$2,105,034
Foreign coin.....	13,303,387
Foreign ores.....	214,803
Foreign gold in silver-lead ores.....	63,742
Total foreign.....	15,691,966
United States coin.....	2,824,146
Total imports.....	18,516,112

The exports of domestic gold bullion aggregated \$17,234,651, of which \$15,118,702 were United States bars and \$2,115,949 private bars.

Of the gold bullion exported, \$12,901,547 were consigned to Great Britain, \$4,100,877 to Germany, \$209,010 to France, \$13,217 to Hong-kong, and \$10,000 to British West Indies.

In addition \$11,770 in foreign gold bullion was re-exported to Great Britain, while \$34,542 represented the invoiced value of the exports of domestic gold ores, and \$209 of the gold in foreign ores exported.

United States gold coin was exported of the value of \$67,704,900, of which \$35,285,950 was consigned to Great Britain, \$14,450,005 to France, \$12,429,500 to Germany, and the remainder to various countries.

Foreign gold coins were re-exported during the year of the value of \$1,411,333, of which \$1,027,196 went to Cuba, \$327,889 to Venezuela, and the remainder to various countries.

The movement of gold from the United States during the last fiscal year may be summed up as follows:

GOLD EXPORTS, 1891.

Items.	Amount.
United States bars.....	\$15,118,702
Other domestic bullion.....	2,115,949
Domestic coin.....	67,704,900
Gold contained in copper matte.....	65,475
Domestic ores.....	34,542
Total domestic.....	85,039,568
Foreign bullion re-exported.....	\$11,770
Foreign coin re-exported.....	1,411,333
Foreign ores re-exported.....	209
Total foreign.....	1,423,312
Total gold exports.....	86,462,880

From the above tables it will be seen that there was a *net* loss of gold to the United States, by excess of exports over imports, of \$67,946,768.

Silver.—The commercial value of the foreign silver bullion imported into the United States during the fiscal year was, as registered at the custom-houses, \$6,321,977, of which \$4,848,771 consisted of unparted bars from Mexico, \$838,992 commercial bars from Germany, \$388,304

commercial bars from England, and the remainder small lots from various countries of this continent.

In addition to the imports of silver bars, silver ores were imported into the United States for reduction, of the invoiced value of \$8,953,608.

As usual, the bulk of these ores, \$8,679,845 came from Mexico, \$254,270 from the British Possessions in North America, and the remainder in small lots from other countries of this continent.

The silver ores imported into the United States were what is known as silver-lead ores, containing in addition to the silver contents large quantities of metallic lead and some gold and copper.

The following valuable table, compiled by the Chief of the Bureau of Statistics from special statements furnished by collectors of customs, exhibits approximately the quantity and value of the different metals contained in these ores.

SILVER ORE IMPORTED INTO THE UNITED STATES DURING THE FISCAL YEAR 1891, WITH THE QUANTITIES AND VALUES OF GOLD, SILVER, LEAD, AND COPPER CONTAINED, IN THE ORE, AS FAR AS COULD BE ASCERTAINED.

Customs districts.	Total ore.		Gold.		Silver.	
	Pounds.	Value.	Ounces.	Value.	Ounces.	Value.
Arizona	15,520,656	\$1,527,018			181,462	434
ChAMPLAIN, N. Y.		* 800				
Corpus Christi, Tex.	24,486,045	1,424,089	1,905	\$36,226	1,443,792	1,285,756
Montana and Idaho.	307,323	40,204				35,074
New Orleans, La.	637,720	48,453				48,453
New York, N. Y.	1,212,000	* 358,457				
North and South Dakota.	85	* 50				
Oswegatchie, N. Y.	301,578	217,893				217,893
Paseo del Norte, Tex. and N. Mex.	167,019,844	5,349,671				4,169,502
Puget Sound, Wash.	62,090	2,395			1,050	1,050
Saltillo, Tex.	19,359,558	713,644	1,778	32,510	595,775	516,246
San Diego, Cal.		4,250				4,205
San Francisco, Cal.		511,070				511,070
Superior, Mich.		1,260			346	353
Total	230,085,809	10,199,344	3,683	68,742	2,040,963	8,252,036

Customs districts.	Lead.		Copper.	
	Pounds.	Value.	Pounds.	Value.
Arizona	1,430,295	\$50,060	242,067	\$12,131
Corpus Christi, Tex.	693,262	24,264		
Montana and Idaho.	11,988	420	64,270	4,800
Paseo del Norte, Tex., and N. Mex.	34,134,631	1,194,714	161,447	8,148
Puget Sound, Wash.	24,542	859		
Saltillo, Tex.	3,962,066	138,672		
San Diego, Cal.	744	26		
Superior, Mich.	32,225	1,128		
Total	40,289,803	1,410,143	468,384	25,129

* No details obtainable.

† Includes value of gold and silver.

NOTE.—The data in this table have been obtained from special reports by the collectors of customs, and although necessarily incomplete in some details are believed to be valuable. This table will not in the total value of ore compare with the stated publications which latter represent only the value of free silver ore and exclude dutiable contents, such as copper and, since October 5, 1890, lead. The value of the lead is estimated at $3\frac{1}{2}$ cents per pound, the average value of bar lead at New York less 1 cent.

From the above table it will be seen that the approximate value of the silver contained in these ores was \$8,252,036 and of the gold \$68,742, while they contained in addition 40,289,803 pounds of metallic lead, of the invoiced value of \$1,410,143 (against \$905,470 in the previous fiscal year), and 468,384 pounds of copper, of the value of \$25,129.

Foreign silver coins were imported of the value of \$11,379,663, of which \$8,187,918 were Mexican dollars and the remainder principally South American coins.

Our own silver coins, principally subsidiary pieces, were returned during the year of the value of \$325,240.

The imports of silver into the United States during the fiscal year may be summed up as follows:

IMPORTS OF SILVER, 1891.

Items.	Amount.
Foreign bullion (commercial value)	\$6,321,977
Silver in foreign ores (commercial value)	8,252,036
Foreign silver coin	11,379,663
Total foreign	25,953,676
United States silver coin	325,240
Total silver imports	26,278,916

Domestic silver bars of the value of \$13,797,391 were exported from the United States during the fiscal year, of which \$12,722,398 were consigned to England.

In addition to exports of domestic silver bullion, copper matte was exported from the port of Baltimore to England, for reduction, containing silver of the commercial value of \$838,388.

The following letter from the collector of the port of Baltimore in regard to the character of this matte and where it was produced will be found interesting:

CUSTOM-HOUSE, BALTIMORE, MD.,
Collector's Office, September 8, 1891.

SIR: In reply to your letter of the 4th instant requesting me to furnish you a statement of the amount of gold and silver contained in silver ores, copper matte, and argentiferous matte exported from the port of Baltimore, during the fiscal year ended June 30, 1891, I inclose a transcript, showing the amount in copper, silver, and gold.

I would say that the "Baltimore Copper Smelting and Rolling Company," the principal exporters of copper ores, now make no distinction between copper matte and silver-copper matte, it being all exported from this custom-house as silver-copper matte, at the uniform basis of 60.5 per cent pure copper, 35 ounces pure silver, and 0.14 of pure gold.

The locality from which the ore is received is the Anaconda mine, State of Montana.

Very respectfully,

H. LINGENFELDER,
Special Deputy Collector.

The DIRECTOR OF THE MINT,
Washington, D. C.

TRANSCRIPT OF THE EXPORTATION OF COPPER MATTE AND SILVER-COPPER MATTE FROM THE PORT OF BALTIMORE DURING THE FISCAL YEAR ENDED JUNE 30, 1891.

[Silver-copper matte calculated on a basis of 60½ per cent fine copper, 35 ounces pure silver, and 0.14 ounce gold per ton.]

Year.	Pounds.	Tons.	Pounds fine copper.	Ounces of silver.	Ounces of gold.
1890.					
July	3,662,915	1,831.46	2,216,066	64,101.1	256.40
August	3,823,297	1,911.64	2,313,080	66,907.4	267.63
November	3,882,625	1,991.32	2,046,488	59,196	236.78
December	5,934,000	2,967	3,590,070	103,845	415.38
1891.					
January	4,033,281	2,017	2,440,570	70,506	282.38
February	6,005,042	3,003	3,633,630	105,105	420.42
March	8,828,000	4,414	5,340,940	154,490	617.96
April	5,224,000	2,612	3,160,520	91,420	365.68
May	2,223,000	1,111	1,344,310	38,885	155.54

[Copper matte calculated on a basis of 60½ per cent fine copper, 33 ounces silver, and 0.10 ounce pure gold per ton.]

Year.	Pounds.	Tons.	Pounds fine copper.	Ounces of silver.	Ounces of gold.
1890.					
July	1,216,000	608	735,680	19,456	60.8
August	1,304,000	652	788,920	20,804	65.2
September	464,000	232	280,720	7,420	23.2

The quantity of gold contained in this matte was approximately 3,167.37 fine ounces, of the value of \$65,475, and the quantity of silver 802,285 fine ounces, worth, at the average price of silver for the year, \$838,388.

United States silver coins were exported of the value of \$236,323.

Foreign silver bullion was reexported of the value of \$29,914, and foreign silver ores of the value of \$104,175.

Foreign silver coin was reexported of the value of \$8,527,360.

The exports of silver during the last fiscal year may be recapitulated as follows:

EXPORTS OF SILVER, 1891.

Items.	Amount.
Domestic bars (commercial value)	\$13,797,391
Silver contained in copper matte	838,388
United States subsidiary silver coin	236,323
Total domestic	14,872,102
Foreign silver coin reexported	\$8,527,360
Silver in foreign ores reexported	104,175
Foreign silver bullion reexported	29,914
Total foreign	8,661,449
Total silver exports	23,533,551

From the above table it will be seen that there was a *net* gain of silver to the United States during the year, by excess of imports over exports, of the value of \$2,745,365.

In the Appendix will be found the usual tables exhibiting the movements of the precious metals to and from the United States each month during the year, and also tables showing the countries from which the precious metals were shipped to the United States and the countries to which the precious metals exported from the United States were consigned.

STOCK OF MONEY IN THE UNITED STATES.

It has been the practice to present in the reports of this Bureau an estimate, based upon official tabulations, of the stock of gold and silver coin in the country.

The foundation of these estimates was the *actual* amount of gold in the Treasury and in National banks on June 30, 1872, with an addition of \$20,000,000 as the minimum amount of gold coin in circulation in the States of the Pacific slope. No allowance was made for the amount in circulation in the States east of the Rocky Mountains.

Since that date the official estimates, presented from year to year, have been prepared, by adding to the *actual* stock June 30, 1872, the annual coinage of the mints (less the amount of our own coin melted for recoinage), and the gain (or loss) by import and export of our own coin, with an annual allowance for melting of United States coin for use in the arts and industries.

In continuation of previous tabulations, the following estimate of the stock of United States coin in the country on July 1, 1891, is presented:

OFFICIAL TABLE OF STOCK OF COIN IN THE UNITED STATES JULY 1, 1891.

Items.	Gold.	Silver.	Total.
Estimated stock of coin July 1, 1890	\$629, 932, 449	\$446, 251, 771	\$1, 076, 184, 220
Coinage, fiscal year 1891	24, 172, 202	38, 272, 020	62, 444, 222
Net imports of United States coin, fiscal year 1891		88, 917	88, 917
Total	654, 104, 651	484, 612, 708	1, 138, 717, 359
Loss:			
Net exports of United States coin for fiscal year 1891	64, 880, 754		64, 880, 754
United States coin melted for recoinage, fiscal year 1891	583, 847	904, 740	1, 488, 587
United States coin used in the arts, fiscal year 1891	3, 500, 000	200, 000	3, 700, 000
Total	68, 964, 601	1, 104, 740	70, 069, 341
Estimated stock of coin July 1, 1891	585, 140, 050	483, 507, 968	1, 068, 648, 018

In addition to the gold and silver coin in the country July 1, 1891, gold and silver bullion belonging to the Government was stored in the mints and assay offices, at that date, valued as follows:

BULLION IN MINTS AND ASSAY OFFICES, JULY 1, 1891.

Metals.	Value.
Gold	\$61,442,802
Silver (coast)	33,094,234
Total	94,537,036

The stock of silver bullion outside Government vaults, is not known except the bars with the Mercantile Safe Deposit Company in New York City, which, according to the report of that company to the New York Stock Exchange, contained, at the close of business June 30, 1891, to 5,605,470 ounces of fine silver, of the market value of \$5,675,538.

Adding the value of the silver bullion in the vaults of the Mercantile Safe Deposit Company and the value of the gold and silver bullion in Government institutions to the stock of coin, the total metallic stock of the United States, July 1, 1891, was as follows:

METALLIC STOCK, JULY 1, 1891.

Coin and bullion.	Value.
Gold	\$646,582,852
Silver (bullion in mints and Mercantile Safe Deposit Company)	522,277,740
Total	1,168,860,592

While the total metallic stock was increased during the year by the sum of \$10,085,644, there was a loss of gold of \$48,980,177, and a gain of silver of \$59,065,821, as compared with the stocks of these metals respectively at the commencement of the year.

This loss of gold was due to the heavy export of United States gold coin during the spring and summer of 1891.

The ownership of the stock of United States coin and gold and silver bullion in the country is exhibited in the following table:

OWNERSHIP OF GOLD AND SILVER IN THE UNITED STATES, JULY 1, 1891.

Ownership.	Gold coin and bullion.	Silver coin and bullion.				Total gold and silver coin and bullion.
		Silver dollars.	Subsidiary silver coin.	Silver bullion.	Total silver.	
United States Treasury	\$119,200,620	\$39,597,123	\$19,629,480	\$33,094,234	\$92,320,837	\$211,521,457
National banks (July 9, 1891)	1158,311,452	527,434,165	5,029,920	.....	32,458,085	190,769,537
Private banks and individuals	369,070,780	338,627,980	53,195,300	5,675,538	397,498,818	766,569,598
Total	646,582,852	405,659,268	77,848,700	38,769,772	522,277,740	1,168,860,592

*Gold coin and bullion in Treasury exclusive of \$120,063,000 gold certificates outstanding.

†Silver dollars in Treasury, exclusive of \$307,235,966 silver certificates outstanding.

‡Includes \$70,616,310 Treasury and clearing-house gold certificates.

§Includes \$19,802,606 silver certificates held by national banks.

The following table exhibits the stock of metallic and paper money in the United States and the location of the same July 1, 1891:

LOCATION OF THE MONEYS OF THE UNITED STATES, JULY 1, 1891.

Moneys.	In Treasury.	In national banks (July 9, 1891).	In other banks and general circulation.	Total.
METALLIC.				
Gold bullion.....	\$61,442,802			\$61,442,802
Silver bullion.....	33,094,234		5,075,538	38,769,772
Gold coin.....	177,820,887	*94,401,142	312,918,021	585,140,050
Silver dollars.....	346,833,089	7,631,470	51,194,709	405,659,268
Subsidiary silver coin.....	19,629,480	5,023,920	53,195,300	77,848,700
Total.....	638,820,492	107,056,532	422,983,568	1,168,860,592
PAPER.				
Legal-tender notes (old issue).....	25,348,656	100,399,811	220,932,549	346,681,016
Legal-tender notes (act July 14, 1890).....	9,879,713		40,348,704	50,228,417
Gold certificates.....	32,423,300	63,910,310	56,152,759	152,486,429
Silver certificates.....	7,479,219	19,802,695	287,433,271	314,715,185
National-bank notes.....	5,706,928	†24,710,899	137,510,147	167,927,974
Currency certificates.....	1,905,000	21,875,000		23,780,000
Total.....	82,742,876	230,698,715	742,377,430	1,055,819,021

* Includes \$0,700,000 gold clearing-house certificates.

† Includes \$3,291,922 of their own notes held by different national banks.

The number of silver dollars in circulation—that is, outside of Treasury vaults—was, on July 1, 1891, \$58,826,179, against \$56,278,749 at the commencement of the year, an increase of \$2,547,430; while the number of silver dollars *owned* by the people—that is, silver dollars and silver certificates in actual circulation—aggregated \$366,062,145, against \$353,834,987 at the commencement of the year, an increase of \$12,227,158 in the silver circulation of the United States.

The number of silver dollars *owned* by the Treasury on July 1, 1891, was \$39,597,123, against \$15,591,479 at the commencement of the fiscal year.

The total metallic and paper money in the United States July 1, 1891, exclusive of the holdings of the United States Treasury and of the silver bullion in the vaults of the Mercantile Safe Deposit Company, was \$1,497,440,707, against \$1,429,307,302 at the commencement of the fiscal year, an increase of \$68,133,405.

The following table exhibits, approximately, the stock of United States gold and silver coins in the country on November 1, 1891:

STOCK OF GOLD AND SILVER COIN IN THE UNITED STATES, NOVEMBER 1, 1891.

Date.	Gold coin.	Silver coin.			Total gold and silver coin.
		Silver dollars.	Subsidiary.	Total silver coin.	
Stock July 1, 1891.....	\$535,140,050	\$405,659,268	\$77,848,700	\$483,507,968	\$1,068,648,018
Gain since that date.....	11,246,222	3,816,100	—547,185	3,268,915	14,515,137
Stock, November 1, 1891.....	596,386,272	409,475,368	77,301,515	486,776,883	1,083,163,155

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The value of the gold and silver bullion in the mints and assay offices at the same date was as follows:

GOLD AND SILVER BULLION IN MINTS AND ASSAY OFFICES, NOVEMBER 1, 1891.

Metals.	Cost value.
Gold	\$74, 753, 259
Silver	48, 482, 492
Total	123, 235, 751

The market value of the silver bullion reported by the Mercantile Safe Deposit Company to the Stock Exchange as in its vaults at the close of business October 31, 1891, was \$3,982,249.

Adding the visible stock of bullion—that is, gold and silver bullion in the mints and silver bullion in the vaults of the Mercantile Safe Deposit Company—to the stock of coin, the total metallic stock on November 1, 1891, was approximately as follows:

METALLIC STOCK, NOVEMBER 1, 1891.

Coin and Bullion.	Amount.
Gold	\$871, 139, 531
Silver (bullion in mints and Mercantile Safe Deposit Company)	539, 241, 624
Total	1, 210, 381, 155

The following table exhibits the amount of paper and metallic money in the United States and the location of the same on November 1, 1891:

LOCATION OF THE MONEYS OF THE UNITED STATES, NOVEMBER 1, 1891.

Moneys.	In Treasury.	Outside of Treasury.	Total.
METALLIC.			
Gold bullion	\$74, 753, 259		\$74, 753, 259
Silver bullion	48, 482, 492	\$3, 982, 249	52, 464, 741
Gold coin	189, 615, 905	406, 770, 367	596, 386, 272
Silver dollars	347, 339, 907	62, 135, 461	409, 475, 368
Subsidiary silver coin	15, 196, 379	62, 105, 136	77, 301, 515
Total	675, 387, 942	534, 993, 213	1, 210, 381, 155
PAPER.			
Legal-tender notes, old issue	14, 127, 027	332, 553, 989	346, 681, 016
Legal-tender notes (act July 14, 1890)	2, 251, 786	66, 473, 484	68, 725, 270
Gold certificates	20, 790, 420	136, 100, 319	156, 890, 739
Silver certificates	2, 525, 759	321, 142, 642	323, 668, 401
National-bank notes	5, 738, 795	166, 445, 763	172, 184, 558
Currency certificates	330, 000	10, 765, 000	11, 095, 000
Total	45, 763, 787	1, 033, 481, 197	1, 079, 244, 984

From an examination of this table it will be seen that the amount of metallic and paper money in circulation, that is outside of the Treasury vaults, and exclusive of the stock of silver bullion in New York City, was \$1,564,492,161 against \$1,499,004,121 at the same date last year, showing an increase in the amount of money in actual circulation in the United States of \$65,488,040.

The following table exhibits, approximately, the stock of gold and silver and "uncovered" paper money in the United Kingdom, France, Germany, and the United States at the present time, and the amount per capita.

The stocks of gold and silver are of course estimates made by the best recognized authorities. In the case of Great Britain the estimate is that of the deputy master of the royal mint, and in the case of Germany it is based upon one by Dr. A. Soetbeer.

ESTIMATED STOCK OF GOLD AND SILVER AND ACTUAL AMOUNT OF "UNCOVERED" PAPER MONEY, IN THE UNITED KINGDOM, FRANCE, GERMANY, AND THE UNITED STATES.

Countries.	Population.	Gold stock.	Silver stock.	Uncovered notes.	Total metallic stock and uncovered notes.
United Kingdom	38,000,000	\$550,000,000	\$107,000,000	\$40,000,000	\$697,000,000
France	39,000,000	900,000,000	700,000,000	88,000,000	1,688,000,000
Germany	49,500,000	540,000,000	220,000,000	150,000,000	910,000,000
United States	64,000,000	671,000,000	539,000,000	409,764,000	1,619,764,000

	Per capita.			
	Gold.	Silver.	Paper.	Total.
United Kingdom	\$14.47	\$2.81	\$1.05	\$18.33
France	23.08	17.95	2.26	43.29
Germany	10.91	4.44	3.03	18.38
United States	10.48	8.42	6.40	25.30

In this table the gold certificates outstanding are embraced in the gold stock, and the silver certificates and Treasury notes in the silver stock, and the same amounts have been deducted from the amount of paper money outstanding. From the legal tender notes outstanding have been deducted \$100,000,000 gold held in the Treasury.

The following table, from the "Bulletin de Statistique," shows the metallic stock of the principal banks of issue of Europe, and the division of the same between gold and silver, and the notes in circulation; and the ratio of reserve to circulation, on the 1st of April of the present year:

THE METALLIC RESERVES AND CIRCULATION OF THE PRINCIPAL BANKS OF ISSUE OF EUROPE, APRIL 1, 1891.

[From the "Bulletin de Statistique," May, 1891.]

Name of bank.	Metallic reserve.	Composition of the reserve.		Notes in circulation.	Ratio of reserve to circulation.
		Gold.	Silver.		
					<i>Per cent.</i>
Imperial Bank of Germany	\$201,782,000			\$251,151,000	80
Austro-Hungarian Bank	106,208,000	\$26,209,000	\$79,989,000	194,197,000	55
National Bank of Belgium	21,384,000			74,247,000	29
National Bank of Bulgaria	676,000			251,000	270
Bank of Denmark	13,722,000			20,014,000	69
Bank of Spain	49,717,000	29,239,000	20,477,000	143,148,000	35
Bank of France	475,629,000	235,055,000	240,382,000	601,986,000	79

THE METALLIC RESERVES AND CIRCULATION OF THE PRINCIPAL BANKS OF ISSUE OF EUROPE, APRIL 1, 1891—Continued.

Name of bank.	Metallic reserve.	Composition of the reserve.		Notes in circulation.	Ratio of reserve to circulation.
		Gold.	Silver.		
Great Britain:					<i>Per cent.</i>
Bank of England	\$111,940,000			\$119,178,000	94
Banks of Scotland	21,076,000	\$17,428,000	\$3,648,000	28,429,000	74
National Bank of Greece	605,000			21,018,000	8
Italy:					
National Bank	38,658,000	33,370,000	5,348,000	111,786,000	34
Institutions of issue	41,933,000	36,284,000	5,655,000	93,065,000	45
Bank of Norway	5,211,000			13,163,000	40
Bank of Netherlands	47,864,000	20,458,000	27,406,000	78,184,000	61
Bank of Portugal	3,995,000	1,949,000	2,046,000	8,318,000	48
National Bank of Roumania	9,785,000			21,114,000	46
Imperial Bank of Russia	212,532,000	207,128,000	5,404,000	693,874,000	30
Royal Bank of Sweden	5,327,000	4,651,000	6,600,000	10,808,000	50
Swiss banks	15,730,000	11,927,000	3,802,000	30,108,000	52

GOLD AND SILVER USED IN THE INDUSTRIAL ARTS.

The following table exhibits the quantity and value of the gold and silver bars furnished manufacturers and jewelers by the United States assay office at New York during the calendar year 1890, and the material employed:

BARS MANUFACTURED FOR USE IN THE INDUSTRIAL ARTS BY THE UNITED STATES ASSAY OFFICE AT NEW YORK DURING THE CALENDAR YEAR ENDED DECEMBER 31, 1890.

Material used.	Gold.		Silver.	
	Fine ounces.	Value.	Fine ounces.	Value.
Domestic bullion	426,432.621	\$8,815,145	2,554,689.02	\$3,303,032
United States coin	47.998	992	613.01	793
Foreign material	17,514.745	302,062	963,018.21	1,245,114
Old plate, jewelry, etc.	103,743.207	2,144,562	308,966.16	399,471
Total	547,738.571	11,322,701	3,827,286.40	4,948,410

The following table exhibits the value of the gold and silver bars furnished for industrial use by the mint at Philadelphia during the calendar year 1890, and the material employed in the composition of such bars:

BARS MANUFACTURED FOR USE IN THE INDUSTRIAL ARTS BY THE UNITED STATES MINT AT PHILADELPHIA DURING THE CALENDAR YEAR ENDED DECEMBER 31, 1890.

Material used.	Gold.		Silver.	
	Fine ounces.	Value.	Fine ounces.	Coining value.
Domestic bullion	34,998.325	\$723,479	102,649.09	\$114,055
United States coin	1,657.026	34,254	409.54	455
Foreign material			274.93	305
Old plate, jewelry, etc.	3,228.079	66,730	12,604.54	14,005
Total	39,883.430	824,463	115,938.10	128,820

For the purpose of ascertaining the value of gold and silver bars furnished by private works for industrial purposes, a circular letter, inclosing a form of report, was addressed to thirty-nine firms in the United States, believed to comprise all the private works engaged in the business of making gold and silver bars.

Replies have been received from thirty-eight of the thirty-nine firms addressed, of which number sixteen reported that they had not manufactured any bars for industrial use during the year, while twenty-two furnished a statement in detail showing the value and composition of the bars so furnished.

The returns on the part of private works are more complete than for any previous inquiry, showing that much popular interest is taken in this important subject. The thanks of the Bureau are due, and are hereby extended, to the officers in charge of private works in the United States who have so courteously furnished the information asked for.

The result of this inquiry upon the part of private works is exhibited in the following table:

BARs FOR INDUSTRIAL USE FURNISHED GOLDSMITHS AND OTHERS BY PRIVATE REFINERIES DURING THE CALENDAR YEAR 1890.

Material used.	Gold bars manufactured.		Silver bars manufactured.	
	Fine ounces.	Value.	Fine ounces.	Coining value.
Domestic bullion (exclusive of United States bars)	57,026.800	\$1,178,848	2,882,251.97	\$3,726,548
United States bars	100,773.687	2,083,177	371,479.71	480,297
United States coin	20,090.870	414,695	600.18	776
Old plate, jewelry, and other old material	41,850.857	865,134	175,279.50	226,624
Total	219,712.214	4,541,854	3,429,611.36	4,434,245

Number of firms addressed	39	Number not manufacturing	16
Number replying	38	Number manufacturing	22

Of the bars furnished by private works to goldsmiths and others for industrial uses \$2,083,177 in gold, and \$480,297 in silver, were what are known as "United States bars," that is, bars bearing the stamp of a mint or Government assay office. As these are included in the bars reported by Government institutions as issued for the same purpose, to prevent duplication the value of these bars must be deducted from the totals reported by private works.

Eliminating, therefore, the value of "United States bars" furnished by private works, the following table exhibits the work of private refineries in this line during the calendar year 1890:

BARs FOR INDUSTRIAL USE (EXCLUSIVE OF GOVERNMENT BARs), FURNISHED GOLDSMITHS AND OTHERS BY PRIVATE REFINERIES DURING THE CALENDAR YEAR 1890.

Material used.	Gold bars manufactured.		Silver bars manufactured.	
	Fine ounces.	Value.	Fine ounces.	Coining value.
Domestic bullion	57,026.800	\$1,178,848	2,882,251.97	\$3,726,548
United States coin	20,090.870	414,695	600.18	776
Old plate, jewelry, and other old material	41,850.857	865,134	175,279.50	226,624
Total	118,968.527	2,458,677	3,058,131.65	3,953,948

The following is a summary of the work of Government and private institutions in the preparation of bars for industrial use during the calendar year 1890:

GOLD AND SILVER BARS FURNISHED FOR USE IN MANUFACTURES AND THE ARTS DURING THE CALENDAR YEAR 1890, AND CLASSIFICATION OF THE MATERIAL USED.

Material.	Gold.	Silver.	Total.
Domestic bullion	\$10,717,472	\$7,143,635	\$17,861,107
United States coin	449,941	2,024	451,965
Foreign bullion and coin	362,062	1,245,419	1,607,481
Old material	3,076,426	640,100	3,716,526
Total	14,605,901	9,031,178	23,637,079

For the purpose of comparison, a table exhibiting the work of Government institutions and private refineries in this line during the calendar year 1889 is here presented:

GOLD AND SILVER BARS FURNISHED FOR USE IN MANUFACTURES AND THE ARTS DURING THE CALENDAR YEAR 1889, AND CLASSIFICATION OF THE MATERIAL USED.

Material.	Gold.	Silver.	Total.
United States coin	\$429,879	\$2,373	\$429,252
Domestic bullion	9,686,827	7,297,933	16,984,760
Foreign coin and bullion	291,258	657,997	949,255
Old material	3,218,971	611,015	3,829,986
Total	13,623,935	8,569,318	22,193,253

Comparing the totals for the two years, it will be seen that the quantity of both gold and silver employed for industrial purposes is steadily increasing in the United States.

The value of the gold bars reported as furnished for industrial use during the calendar year 1889 was \$13,623,935, and in 1890, \$14,605,901, an increase of \$981,966, and silver, \$9,031,178 in 1890 against \$8,569,318 in the preceding year.

The amount of gold coin reported as used in the composition of bars for industrial uses was only \$449,941, against an estimated melting down annually of \$3,500,000 of our gold coin for industrial uses, based upon four censuses taken for different years by this Bureau as to the direct employment of the precious metals by goldsmiths and others in the manufacture of watches, jewelry, and gilding. The amount of United States silver coin reported as melted in the composition of bars for industrial use during the last year was only \$2,024, against a reported melting down of silver coin by jewelers and others, based upon the censuses referred to, of \$200,000 annually.

As is well known, the melting of coin for industrial uses is principally upon the part of jewelers, and not by private works manufacturing bars. If, therefore, there has been no falling off in the amount of coin used in repairs and jewelry, the value of the precious metals used in the industrial arts in the United States during the calendar year 1890 approximated \$18,105,901 gold, and \$9,231,178 silver (coining value), of which \$10,717,472 gold and \$7,143,635 silver was new bullion.

It has been the practice of the Bureau to solicit information from private refineries as to the preparation of bars of gold and silver only for calendar years. The information covering the last fiscal year is therefore confined to Government institutions.

The following tables exhibit the quantity and value of the bars of gold and silver issued by Government institutions for industrial uses during the fiscal year ended June 30, 1891.

BARs ISSUED FOR USE IN THE INDUSTRIAL ARTS, BY THE UNITED STATES ASSAY OFFICE AT NEW YORK, DURING THE FISCAL YEAR 1891.

Material used.	Gold.		Silver.	
	Fine ounces.	Value.	Fine ounces.	Value.
United States coin.....	74. 157	\$1, 532. 96	559. 90	\$723. 02
Domestic bullion.....	410, 081. 260	8, 477, 132. 01	2, 849, 616. 22	2, 684, 352. 28
Foreign material.....	18, 060. 379	873, 341. 16	862, 345. 36	1, 114, 961. 58
Old plate, jewelry, etc.....	109, 880. 777	2, 271, 437. 22	821, 858. 44	416, 140. 21
Total.....	538, 096. 573	11, 123, 443. 35	4, 034, 379. 92	5, 216, 167. 90

BARs ISSUED BY THE UNITED STATES MINT AT PHILADELPHIA, FOR USE IN THE INDUSTRIAL ARTS, DURING THE FISCAL YEAR 1891.

Material used.	Gold.		Silver.	
	Fine ounces.	Value.	Fine ounces.	Value.
United States coin.....	1, 731. 775	\$35, 798. 97	177. 30	\$229. 23
Domestic bullion.....	50, 796. 859	1, 050, 064. 26	2, 978. 23	3, 850. 63
Foreign material.....			1, 336. 58	1, 728. 09
Old plate, jewelry, etc.....	2, 823. 745	58, 371. 99	17, 433. 81	22, 540. 67
Total.....	55, 352. 379	1, 144, 235. 22	21, 925. 92	28, 348. 61

BARs ISSUED BY THE UNITED STATES ASSAY OFFICE AT NEW YORK AND THE UNITED STATES MINT AT PHILADELPHIA, FOR USE IN THE INDUSTRIAL ARTS, DURING THE FISCAL YEAR 1891.

Material used.	Gold.		Silver.	
	Fine ounces.	Value.	Fine ounces.	Value.
United States coin.....	1, 805. 932	\$37, 331. 93	737. 20	\$953. 15
Domestic bullion.....	460, 878. 119	9, 527, 196. 27	2, 852, 594. 45	3, 688, 202. 90
Foreign material.....	18, 060, 379	373, 341. 16	863, 681. 94	1, 116, 679. 67
Old plate, jewelry, etc.....	112, 794. 522	2, 329, 809. 21	339, 292. 25	438, 680. 88
Total.....	593, 448. 952	12, 267, 678. 57	4, 056, 305. 84	5, 244, 516. 60

Comparing the totals of the above tables with the work of the preceding fiscal year, it appears that the gold bars paid out at these two institutions for use in the industrial arts during the fiscal year 1891 aggregated \$12,267,678.57 against \$11,639,980 in the preceding fiscal year, an increase of \$627,698 in gold. For silver, the amount for the fiscal year 1891 was \$5,244,516.60 against \$5,312,349 in the preceding fiscal year, a falling off of \$67,833.

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PRODUCT OF GOLD AND SILVER.

The statistics of the product of gold and silver in the United States were presented for the calendar year 1890 in a special report to Congress.

These statistics are collected only for calendar years.

The product of gold and silver from the mines of the United States, exclusive of foreign bullion and ores reduced in this country, was as follows:

PRODUCT OF MINES OF THE UNITED STATES, 1890.

Metals.	Fine ounces.	Commercial value.	Coining value.
Gold	1, 588, 880	\$32, 845, 000	\$32, 845, 000
Silver	54, 500, 000	57, 225, 000	70, 464, 645
Total		90, 070, 000	103, 309, 645

The following tables exhibit, approximately, the product of gold and silver from the mines and smelters of the United States during the calendar year 1890, including the amount obtained from foreign material treated.

GOLD PRODUCT OF REFINERIES IN THE UNITED STATES, 1890.

Items.	Fine ounces (troy).		
	Domestic.	Foreign.	Total.
Reported product of private refineries in the United States	867, 584	44, 078	911, 662
Unrefined gold deposited at Government institutions	716, 156	210, 548	926, 704
Total	1, 583, 740	254, 626	1, 838, 366

SILVER PRODUCT OF REFINERIES IN THE UNITED STATES, 1890.

Items.	Fine ounces (troy).		
	Domestic.	Foreign.	Total.
Reported product of private refineries in the United States	50, 132, 421	9, 304, 036	59, 436, 457
Unrefined silver deposited at Government institutions	3, 101, 246	2, 383, 224	5, 484, 470
Total	53, 233, 667	11, 687, 260	64, 920, 927

The distribution of the product of our own mines among producing States and Territories was, approximately, as follows:

APPROXIMATE DISTRIBUTION, BY PRODUCING STATES AND TERRITORIES, OF THE PRODUCT OF GOLD AND SILVER FROM THE MINES OF THE UNITED STATES FOR THE CALENDAR YEAR 1890.

State or Territory.	Gold.		Silver.		Total value.
	Fine ounces.	Value.	Fine ounces.	Coining value.	
Alaska	36,886	\$762,500	7,500	\$9,697	\$772,197
Arizona	48,375	1,000,000	1,000,000	1,292,929	2,292,929
California	604,687	12,500,000	900,000	1,163,636	13,663,636
Colorado	200,756	4,150,000	18,800,000	24,307,070	28,457,070
Georgia	4,837	100,000	400	517	100,517
Idaho	89,494	1,850,000	3,700,000	4,783,838	6,633,838
Michigan	4,354	90,000	55,000	71,111	161,111
Montana	159,638	3,300,000	15,750,000	20,363,636	23,663,636
Nevada	135,450	2,800,000	4,450,000	5,753,535	8,553,535
New Mexico	41,119	850,000	1,300,000	1,680,808	2,530,808
North Carolina	5,732	118,500	6,000	7,757	126,257
Oregon	53,213	1,100,000	75,000	96,969	1,196,969
South Carolina	4,837	100,000	400	517	100,517
South Dakota	154,800	3,200,000	100,000	129,292	3,329,292
Texas			300,000	387,878	387,878
Utah	32,805	680,000	8,000,000	10,343,434	11,023,434
Washington	9,869	204,000	70,000	90,565	294,565
Alabama, Maryland, Tennessee, Virginia, Vermont, and Wyoming	1,935	40,000	2,000	2,585	42,585
Total	1,588,877	32,845,000	54,516,300	70,485,714	103,330,714

In the Appendix will be found a table showing the annual product of gold and silver from the mines of the United States since 1792.

A table will also be found, compiled principally from information furnished at the instance of this Bureau by foreign governments through our diplomatic representatives abroad, and revised from the latest returns at hand, exhibiting the quantity and value of the gold and silver product of the principal producing countries of the world for the calendar years 1888, 1889, and 1890.

In the preparation of this table, in cases where official estimates or reports were not at hand, either the product officially reported for the preceding or some near year has been used by way of estimate, or the product as ascertained from other reliable sources; but in cases where the product credited a producing country is not an official estimate this fact, as well as the data upon which the estimate is based, has been stated in a footnote.

The value of silver in this table, as in similar tables for preceding years, published in the reports of this Bureau, has, for the purpose of uniformity, been reckoned at the coining rate in silver dollars, viz, \$1.2929 per fine ounce.

REPORT OF THE SECRETARY OF THE TREASURY. 201

The following table exhibits the product of the precious metals in the world for each calendar year, since 1873. The silver product is given at its commercial value, calculated at the average market price of silver each year, as well as at its coining value:

PRODUCT OF GOLD AND SILVER IN THE WORLD, CALENDAR YEARS 1873-1890.

Calendar years.	Gold.	Silver.		
		Fine ounces (troy).	Commercial value.	Coining value.
1873.....	\$96,200,000	63,267,000	\$82,120,000	\$81,800,000
1874.....	90,750,000	55,300,000	70,673,000	71,500,000
1875.....	97,500,000	62,262,000	77,578,000	80,500,000
1876.....	103,700,000	67,753,000	78,322,000	87,600,000
1877.....	114,000,000	62,648,000	75,210,000	81,000,000
1878.....	119,000,000	73,476,000	84,644,000	95,000,000
1879.....	109,000,000	74,250,000	83,383,000	96,000,000
1880.....	106,500,000	74,791,000	85,636,000	96,700,000
1881.....	103,000,000	78,890,000	89,777,000	102,000,000
1882.....	103,000,000	86,470,000	98,230,000	111,800,000
1883.....	95,400,000	89,177,000	98,980,000	115,300,000
1884.....	101,700,000	81,597,000	90,817,000	105,500,000
1885.....	108,400,000	91,652,000	97,564,000	118,500,000
1886.....	106,000,000	93,276,000	92,772,000	120,600,000
1887.....	105,775,000	96,124,000	94,031,000	124,281,000
1888.....	110,197,000	108,827,000	102,185,000	140,706,000
1889.....	122,438,500	123,500,000	115,487,000	159,678,000
1890.....	116,009,000	128,014,000	134,886,000	166,677,000

WORLD'S COINAGE.

In the Appendix will be found a table exhibiting the coinage of each nation, so far as reported, during the calendar years 1888, 1889, and 1890.

The following summary is presented:

WORLD'S COINAGE.

Calendar years.	Gold.	Silver.
1888.....	\$134,828,855	\$134,922,344
1889.....	168,901,519	138,444,595
1890.....	149,009,772	140,405,099

It should be remembered that the coinage executed does not represent the amount of new gold and silver, of current production, made into coins during the year, for the reason that the coinages reported include the value of domestic and foreign coins melted for recoinage as well as old material, plate, etc., used in coinage.

Governments were requested to report, in addition to the coinage of gold and silver, the data covering recoinages, but failed to do so in many instances.

The following table of recoinages for the calendar years 1889 and 1890 has been prepared from information furnished by foreign governments.

RECOINAGES REPORTED BY CERTAIN COUNTRIES, CALENDAR YEARS 1889 AND 1890.

Countries.	1889.		1890.	
	Gold.	Silver.	Gold.	Silver.
United States	\$4,666,442	\$1,173,526	\$8,840,150	\$3,373,000
Great Britain	2,937,084	1,129,476	15,808,519	1,444,844
Australasia	658,982		373,669	
India (British)	1,148	4,731,944		2,942,450
France	1,596,801		2,315,919	
Switzerland		217,125		279,850
Spain			467,716	1,479,152
Italy		60,208		1,091
Portugal			407,160	540,000
Netherlands		132,660		84,420
Germany	7,940,065	177,079	2,191,691	
Austria-Hungary	9,229		922,417	928,653
Denmark		27,607		
Norway		23,718		20,368
Sweden		127,389		253,867
Russia		762,480	433,752	
Colombia		65,156		
Japan	15	23,539		1,125
Total	17,815,766	8,651,907	31,760,903	11,348,820

VALUE OF FOREIGN COINS.

The law requires:

That the value of foreign coins as expressed in the money of account of the United States shall be that of the pure metal of such coin of standard value; and the values of the standard coins in circulation of the various nations of the world shall be estimated quarterly by the Director of the Mint, and be proclaimed by the Secretary of the Treasury immediately after the passage of this act and thereafter quarterly on the 1st day of January, April, July, and October in each year.

In accordance with the above requirement the values of foreign coins were estimated by me, and proclaimed by the Secretary of the Treasury, on January 1, April 1, July 1, and October 1, 1891, to be as follows:

VALUES OF FOREIGN COINS, JANUARY 1, 1891.

Country.	Standard.	Monetary unit.	Value in terms of U. S. gold dollar.	Coins.
Argentine Republic.	Gold and silver.	Peso	\$0.96, 5	Gold: argentine (\$1.82,4) and $\frac{1}{2}$ argentine. Silver: peso and divisions.
Austria-Hungary...	Silver	Fiorin38, 1	Gold: 4 florins (\$1.92,9), 8 florins (\$3.85,8), ducat (\$2.28,7), and 4 ducats (\$9.15,8). Silver: 1 and 2 florins.

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VALUES OF FOREIGN COINS, JANUARY 1, 1891—Continued.

Country.	Standard.	Monetary unit.	Value in terms of U. S. gold dollar.	Coins.
Belgium	Gold and silver.	Franc	\$0.19, 3	Gold: 10 and 20 francs. Silver: 5 francs.
Bolivia	Silver	Boliviano .....	.77, 1	Silver: boliviano and divisions.
Brazil	Gold	Milreis .....	.54, 6	Gold: 5, 10, and 20 milreis. Silver: $\frac{1}{2}$, 1, and 2 milreis.
British Possessions North America (except Newfoundland).	Gold	Dollar	1.00	
Central American States:				
Costa Rica	Silver	Peso .....	.77, 1	Silver: peso and divisions.
Guatemala				
Honduras				
Nicaragua				
Salvador				
Chili	Gold and silver.	Peso .....	.91, 2	Gold: escudo (\$1.82, 4), doubloon (\$4.56, 1), and condor (\$9.12, 3). Silver: peso and divisions.
China	Silver	Tael { Shanghai .. Haikwan .. (customs) ..	1.13, 9 1.27	
Colombia	Silver	Peso .....	.77, 1	Gold: condor (\$9.64, 7) and double condor. Silver: peso.
Cuba	Gold and silver.	Peso .....	.92, 6	Gold: doubloon (\$5.01, 7). Silver: peso.
Denmark	Gold	Crown .....	.26, 8	Gold: 10 and 20 crowns.
Ecuador	Silver	Sucre .....	.77, 1	Gold: condor (\$9.64, 7) and double condor. Silver: sucre and divisions.
Egypt	Gold	Pound (100 plasters).	4.94, 3	Gold: pound (100 plasters), 50 plasters, 20 plasters, 10 plasters, and 5 plasters. Silver: 1, 2, 5, 10, and 20 plasters.
Finland	Gold	Mark .....	.19, 3	Gold: 20 marks (\$3.85, 9), 10 marks (\$1.93).
France	Gold and silver.	Franc .....	.19, 3	Gold: 5, 10, 20, 50, and 100 francs. Silver: 5 francs.
German Empire	Gold	Mark .....	.23, 8	Gold: 5, 10, and 20 marks.
Great Britain	Gold	Pound sterling ..	4.86, 6 $\frac{1}{2}$	Gold: sovereign (pound sterling) and $\frac{1}{2}$ sovereign.
Greece	Gold and silver.	Drachma .....	.19, 3	Gold: 5, 10, 20, 50, and 100 drachmas. Silver: 5 drachmas.
Haiti	Gold and silver.	Gourde .....	.96, 5	Silver: gourde.
India	Silver	Rupée .....	.36, 6	Gold: mohur (\$7.10, 5). Silver: rupee and divisions.
Italy	Gold and silver.	Lira .....	.19, 3	Gold: 5, 10, 20, 50, and 100 liras. Silver: 5 liras.

VALUES OF FOREIGN COINS, JANUARY 1, 1891—Continued.

Country.	Standard.	Monetary unit.	Value in terms of U. S. gold dollar.	Coins.
Japan	Gold and silver.*	Yen. { gold { silver.....	\$0.99, 7 .83, 1	Gold: 1, 2, 5, 10, and 20 yen. Silver: yen.
Liberia	Gold.....	Dollar	1.00	
Mexico	Silver.....	Dollar .....	.83, 7	Gold: dollar (\$0.98, 3), 2½, 5, 10, and 20 dollars. Silver: dollar (or peso) and divisions.
Netherlands	Gold and silver.	Florin .....	.40, 2	Gold: 10 florins. Silver: ½, 1, and 2½ florins.
Newfoundland	Gold	Dollar	1.01, 4	Gold: 2 dollars (\$2.02, 7+).
Norway	Gold	Crown .....	.26, 8	Gold: 10 and 20 crowns.
Peru.....	Silver.....	Sol .....	.77, 1	Silver: sol and divisions.
Portugal.....	Gold	Milreis	1.08	Gold: 1, 2, 5, and 10 milreis.
Russia	Silver.....	Rouble .....	.61, 7	Gold: imperial (\$7.71, 8), and ½ imperial (\$3.86, 0).† Silver: ½, 1, and 1 rouble.
Spain	Gold and silver.	Peseta .....	.19, 3	Gold: 25 pesetas. Silver: 5 pesetas.
Sweden	Gold	Crown .....	.26, 8	Gold: 10 and 20 crowns.
Switzerland	Gold and silver.	Franc .....	.19, 3	Gold: 5, 10, 20, 50, and 100 francs. Silver: 5 francs.
Tripoli	Silver.....	Mahbub of 20 piasters.	.69, 5	
Turkey	Gold	Piaster .....	.04, 4	Gold: 25, 50, 100, 250, and 500 piasters.
Venezuela	Silver.....	Bolivar .....	.15, 4	Gold: 5, 10, 20, 50, and 100 bolivars. Silver: 5 bolivars.

* Gold the nominal standard. Silver practically the standard.

† Coined since January 1, 1886. Old half-imperial = \$3.98, 6.

VALUES OF FOREIGN COINS, APRIL 1, 1891.

Country.	Standard.	Monetary unit.	Value in terms of U. S. gold dollar.	Coins.
Argentine Republic.	Gold and silver.	Peso	\$0.96, 5	Gold: argentine (\$4.82, 4) and ½ argentine. Silver: peso and divisions.
Austria-Hungary ..	Silver.....	Florin .....	.36, 3	Gold: 4 florins (\$1.92, 9), 8 florins (\$3.85, 8), ducats (\$2.28, 7) and 4 ducats (\$9.15, 8). Silver: 1 and 2 florins.
Belgium	Gold and silver.	Franc .....	.19, 3	Gold: 10 and 20 francs. Silver: 5 francs.
Bolivia	Silver.....	Boliviano .....	.73, 5	Silver: boliviano and divisions.
Brasil	Gold	Milreis .....	.54, 0	Gold: 5, 10, and 20 milreis. Silver: ½, 1, and 2 milreis.

VALUES OF FOREIGN COINS, APRIL 1, 1891—Continued.

Country.	Standard.	Monetary unit.	Value in terms of U. S. gold dollar.	Coins.
British Possessions N. A. (except Newfoundland).	Gold	Dollar	\$1.00	
Central American States—				
Costa Rica	Silver	Peso .....	.73, 5	Silver: peso and divisions.
Guatemala				
Honduras				
Nicaragua				
Salvador				
Chile	Gold and silver.	Peso .....	.91, 2	Gold: escudo (\$1.82, 4), doubloon (\$4.56, 1), and condor (\$9.12, 3). Silver: peso and divisions.
China	Silver	Tael { Shanghai .. Hankwan .. (Customs).	1.08, 5	
			1.20, 9	
Colombia	Silver	Peso .....	.73, 5	Gold: condor (\$9.64, 7) and double condor. Silver: peso.
Cuba	Gold and silver.	Peso .....	.92, 6	Gold: doubloon (\$5.01, 7). Silver: peso.
Denmark	Gold	Crown .....	.26, 8	Gold: 10 and 20 crowns.
Ecuador	Silver	Sucre .....	.73, 5	Gold: condor (\$9.64, 7) and double condor. Silver: sucre and divisions.
Egypt	Gold	Pound (100 piasters.	4.94, 3	Gold: pound (100 piasters), 50 piasters, 20 piasters, 10 piasters, and 5 piasters. Silver: 1, 2, 5, 10, and 20 piasters.
Finland	Gold	Mark .....	.19, 3	Gold: 20 marks (\$3.85, 9), 10 marks (\$1.93).
France	Gold and silver.	Franc .....	.19, 3	Gold: 5, 10, 20, 50, and 100 francs. Silver: 5 francs.
German Empire	Gold	Mark .....	.23, 8	Gold: 5, 10, and 20 marks.
Great Britain	Gold	Pound sterling	4.86, 6½	Gold: sovereign (pound sterling) and ½ sovereign.
Greece	Gold and silver.	Drachma .....	.10, 3	Gold: 5, 10, 20, 50, and 100 drachmas. Silver: 5 drachmas.
Haiti	Gold and silver.	Gourde .....	.96, 5	Silver: gourde.
India	Silver	Rupee .....	.34, 9	Gold: mohur (\$7.10, 5). Silver: rupee and divisions.
Italy	Gold and silver.	Lira .....	.19, 3	Gold: 5, 10, 20, 50, and 100 liras. Silver: 5 liras.
Japan	Gold and silver.*	Yen { Gold .....	.99, 7	Gold: 1, 2, 5, 10, and 20 yen. Silver: yen.
			.79, 2	
Liberia	Gold	Dollar	1.00	
Mexico	Silver	Dollar .....	.80	Gold: dollar (\$0.98, 3), 2½, 5, 10, and 20 dollars. Silver: dollar (or peso) and divisions.
Netherlands	Gold and silver.	Florin .....	.40, 2	Gold: 10 florins. Silver: ½, 1, and 2½ florins.

* Gold the nominal standard. Silver practically the standard.

VALUES OF FOREIGN COINS, APRIL 1, 1891—Continued.

Country.	Standard.	Monetary unit.	Value in terms of U. S. gold dollar.	Coins.
Newfoundland.....	Gold.....	Dollar.....	\$1.01, 4	Gold: 2 dollars (\$2.02, 7+).
Norway.....	Gold.....	Crown.....	.26, 8	Gold: 10 and 20 crowns.
Peru.....	Silver.....	Sol.....	.73, 5	Silver: sol and divisions.
Portugal.....	Gold.....	Milreis.....	1.08	Gold: 1, 2, 5, and 10 milreis.
Russia.....	Silver.....	Rouble.....	.58, 8	Gold: imperial (\$7.71, 8) and $\frac{1}{2}$ imperial* (\$3.86, 0). Silver: $\frac{1}{2}$, $\frac{1}{4}$, and 1 rouble.
Spain.....	Gold and silver.	Peseta.....	.19, 3	Gold: 25 pesetas. Silver: 5 pesetas.
Sweden.....	Gold.....	Crown.....	.26, 8	Gold: 10 and 20 crowns.
Switzerland.....	Gold and silver.	Franc.....	.19, 3	Gold: 5, 10, 20, 50, and 100 francs. Silver: 5 francs.
Tripoli.....	Silver.....	Mahbub of 20 piasters.	.66, 3	
Turkey.....	Gold.....	Piaster.....	.04, 4	Gold: 25, 50, 100, 250, and 500 piasters.
Venezuela.....	Silver.....	Bolivar.....	.14, 7	Gold: 5, 10, 20, 50, and 100 bolivars. Silver: 5 bolivars.

*Coined since January 1, 1886. Old half-imperial = \$3.98.0.

VALUES OF FOREIGN COINS JULY 1, 1891.

Country.	Standard.	Monetary unit.	Value in terms of U. S. gold dollar.	Coins.
Argentine Republic.	Gold and silver.	Peso.....	\$0.96, 5	Gold: Argentine (\$4.82, 4) and $\frac{1}{2}$ Argentine. Silver: peso and divisions.
Austria-Hungary....	Silver.....	Florin.....	.36, 3	Gold: 4 florins (\$1.92, 9), 8 florins (\$3.85, 8), ducat (\$2.28, 7), and 4 ducats (\$9.15, 8). Silver: 1 and 2 florins.
Belgium.....	Gold and silver.	Franc.....	.19, 3	Gold: 10 and 20 francs. Silver: 5 francs.
Bolivia.....	Silver.....	Boliviano.....	.73, 6	Silver: Boliviano and divisions.
Brazil.....	Gold.....	Milreis.....	.54, 6	Gold: 5, 10, and 20 milreis. Silver: $\frac{1}{2}$, 1, and 2 milreis.
British Possessions, N. A. (except Newfoundland).	Gold.....	Dollar.....	1.00	
Central American States—				
Costa Rica.....	Silver.....	Peso.....	.73, 6	Silver: peso and divisions.
Guatemala.....				
Honduras.....				
Nicaragua.....				
Salvador.....				
Chili.....	Gold and silver.	Peso.....	.91, 2	Gold: escudo (\$1.82, 4), doubloon (\$4.50, 1), and condor (\$9.12, 3). Silver: peso and divisions.

VALUES OF FOREIGN COINS JULY 1, 1891—Continued.

Country.	Standard.	Monetary unit.	Value in terms of U. S. gold dollar.	Coins.
China.....	Silver.....	Tael. { Shanghai. Haikwan. (customs).	\$1.06, 7 1.21	
Colombia.....	Silver.....	Peso.....	.73, 6	Gold: condor (\$9.84, 7) and double condor. Silver: peso.
Cuba.....	Gold and silver.	Peso.....	.92, 6	Gold: doubloon (\$5.01, 7). Silver: peso.
Denmark.....	Gold.....	Crown.....	.26, 8	Gold: 10 and 20 crowns.
Ecuador.....	Silver.....	Sucro.....	.73, 6	Gold: condor (\$9.84, 7) and double condor. Silver: sucro and divisions.
Egypt.....	Gold.....	Pound (100 piasters).	4.94, 8	Gold: pound (100 piasters), 50 piasters, 20 piasters, 10 piasters, and 5 piasters. Silver: 1, 2, 5, 10, and 20 piasters.
Finland.....	Gold.....	Mark.....	.19, 3	Gold: 20 marks (\$3.85, 9), 10 marks (\$1.93).
France.....	Gold and silver.	Franc.....	.19, 3	Gold: 5, 10, 20, 50, and 100 francs. Silver: 5 francs.
German Empire.....	Gold.....	Mark.....	.23, 8	Gold: 5, 10, and 20 marks.
Great Britain.....	Gold.....	Pound sterling...	4.86, 6½	Gold: sovereign (pound sterling) and ½ sovereign.
Greece.....	Gold and silver.	Drachma.....	.19, 3	Gold: 5, 10, 20, 50, and 100 drachmas. Silver: 5 drachmas.
Haiti.....	Gold and silver.	Gourde.....	.96, 5	Silver: gourde.
India.....	Silver.....	Rupee.....	.35	Gold: mohur (\$7.10, 5). Silver: rupee and divisions.
Italy.....	Gold and silver.	Lira.....	.19, 3	Gold: 5, 10, 20, 50, and 100 liras. Silver: 5 liras.
Japan.....	Gold and silver.*	Yen... { Gold... Silver...	.99, 7 .79, 3	Gold: 1, 2, 5, 10, and 20 yen. Silver: yen.
Liberia.....	Gold.....	Dollar.....	1.00	
Mexico.....	Silver.....	Dollar.....	.80	Gold: dollar (\$0.98, 3), 2½, 5, 10, and 20 dollars. Silver: dollar (or peso) and divisions.
Netherlands.....	Gold and silver.	Florin.....	.40, 2	Gold: 10 florins. Silver: ½, 1, and 2½ florins.
Newfoundland.....	Gold.....	Dollar.....	1.01, 4	Gold: 2 dollars (\$2.02, 7).
Norway.....	Gold.....	Crown.....	.26, 8	Gold: 10 and 20 crowns.
Peru.....	Silver.....	Sol.....	.73, 6	Silver: sol and divisions.
Portugal.....	Gold.....	Milreis.....	1.08	Gold: 1, 2, 5, and 10 milreis.
Russia.....	Silver.....	Rouble.....	.58, 8	Gold: imperial (\$7.71, 8), and ½ imperial (\$3.86). Silver: ½, ¼, and 1 rouble.
Spain.....	Gold and silver.	Peseta.....	.10, 3	Gold: 25 pesetas. Silver: 5 pesetas.
Sweden.....	Gold.....	Crown.....	.26, 8	Gold: 10 and 20 crowns.

* Gold the nominal standard. Silver practically the standard.

† Coined since January 1, 1886. Old half imperial = \$3.98, 6.

VALUES OF FOREIGN COINS, JULY 1, 1891—Continued.

Country.	Standard.	Monetary unit.	Value in terms of U. S. gold dollar.	Coins.
Switzerland	Gold and silver.	Franc	\$0.19, 3	Gold: 5, 10, 20, 50, and 100 francs. Silver: 5 francs.
Tripoli	Silver	Mahbub of 20 piasters.	.66, 4	
Turkey	Gold	Piaster .....	.04, 4	Gold: 25, 50, 100, 250, and 500 piasters.
Venezuela	Silver	Bolivar .....	.14, 7	Gold: 5, 10, 20, 50, and 100 bolivars. Silver: 5 bolivars.

VALUES OF FOREIGN COINS, OCTOBER 1, 1891.

Country.	Standard.	Monetary unit.	Value in terms of U. S. gold dollar.	Coins.
Argentine Republic.	Gold and silver.	Peso	\$0.90, 5	Gold: Argentine (\$1.82, 4) and $\frac{1}{2}$ Argentine. Silver: peso and divisions.
Austria-Hungary...	Silver	Florins .....	.35, 7	
Belgium	Gold and silver.	Franc .....	.19, 3	Gold: 10 and 20 francs. Silver: 5 francs.
Bolivia	Silver	Boliviano .....	.72, 3	Silver: Boliviano and divisions.
Brazil	Gold	Milreis .....	.54, 0	Gold: 5, 10, and 20 milreis. Silver $\frac{1}{2}$, 1, and 2 milreis.
British Possessions, N. A. (except Newfoundland).	Gold	Dollar	1.00	
Central American States—				
Costa Rica	Silver	Peso .....	.72, 3	Silver: peso and divisions.
Guatemala				
Honduras				
Nicaragua				
Salvador				
Chile	Gold and silver.	Peso .....	.91, 2	Gold: escudo (\$1.82, 4), doubloon (\$4.56, 1), and condor (\$9.12, 3). Silver: peso and divisions.
China	Silver	Taol. {	Shanghai .. 1.06, 8	
			Haikwan (customs). 1.18, 9	
Colombia	Silver	Peso .....	.72, 3	Gold: condor (\$9.64, 7) and double condor. Silver: peso.
Cuba	Gold and silver.	Peso .....	.92, 6	Gold: doubloon (\$5.01, 7). Silver: peso.
Denmark	Gold	Crown .....	.26, 8	Gold: 10 and 20 crowns.
Ecuador	Silver	Sucre .....	.72, 3	Gold: condor (\$9.64, 7) and double condor. Silver: sucre and divisions.

VALUES OF FOREIGN COINS, OCTOBER 1, 1891—Continued.

Country.	Standard.	Monetary unit.	Value in terms of U. S. gold dollar.	Coins.
Egypt.....	Gold.....	Pound (100 piasters).	\$4.94, 3	Gold: pound (100 piasters), 50 piasters, 20 piasters, 10 piasters, and 5 piasters. Silver: 1, 2, 5, 10, and 20 piasters.
Finland.....	Gold.....	Mark.....	.19, 3	Gold: 20 marks (\$3.85, 9), 10 marks (\$1.93).
France.....	Gold and silver.	Franc.....	.19, 3	Gold: 5, 10, 20, 50, and 100 francs. Silver: 5 francs.
German Empire.....	Gold.....	Mark.....	.23, 8	Gold: 5, 10, and 20 marks.
Great Britain.....	Gold.....	Pound sterling.....	4.86, 6½	Gold: sovereign (pound sterling) and ½ sovereign.
Greece.....	Gold and silver.	Drachma.....	.19, 3	Gold: 5, 10, 20, 50, and 100 drachmas. Silver: 5 drachmas.
Haiti.....	Gold and silver.	Gourde.....	.96, 5	Silver: gourde.
India.....	Silver.....	Rupce.....	.34, 3	Gold: mohur (\$7.10, 5). Silver: rupce and divisions.
Italy.....	Gold and silver.	Lira.....	.19, 3	Gold: 5, 10, 20, 50, and 100 liras. Silver: 5 liras.
Japan.....	Gold and silver.*	Yen. { Gold..... Silver.....	.99, 7 .77, 9	Gold: 1, 2, 5, 10, and 20 yen. Silver: yen.
Liberia.....	Gold.....	Dollar.....	1.00	
Mexico.....	Silver.....	Dollar.....	.78, 5	Gold: dollar (\$0.98, 3), 2½, 5, 10, and 20 dollars. Silver: dollar (or peso) and divisions.
Netherlands.....	Gold and silver.	Florin.....	.40, 2	Gold: 10 florins. Silver: ½, 1, and 2½ florins.
Newfoundland.....	Gold.....	Dollar.....	1.01, 4	Gold: 2 dollars (\$2.02, 7).
Norway.....	Gold.....	Crown.....	.26, 8	Gold: 10 and 20 crowns.
Peru.....	Silver.....	Sol.....	.72, 3	Silver: sol and divisions.
Portugal.....	Gold.....	Milreis.....	1.08	Gold: 1, 2, 5, and 10 milreis.
Russia.....	Silver.....	Rouble.....	.57, 8	Gold: imperial (\$7.71, 8), and ½ imperial †(\$3.86). Silver: ½, ¼, and 1 rouble.
Spain.....	Gold and silver.	Peseta.....	.19, 3	Gold: 25 pesetas. Silver: 5 pesetas.
Sweden.....	Gold.....	Crown.....	.26, 8	Gold: 10 and 20 crowns.
Switzerland.....	Gold and silver.	Franc.....	.19, 3	Gold: 5, 10, 20, 50, and 100 francs. Silver: 5 francs.
Tripoli.....	Silver.....	Mahbub of 20 piasters.	.65, 2	
Turkey.....	Gold.....	Piaster.....	.04, 4	Gold: 25, 50, 100, 250, and 500 piasters.
Venezuela.....	Silver.....	Bolivar.....	.14, 5	Gold: 5, 10, 20, 50, and 100 bolivars. Silver: 5 bolivars.

* Gold the nominal standard. Silver practically the standard.

† Coined since January 1, 1886. Old half-imperial = \$3.98, 6.

In estimating the value of foreign coins the same practice has been followed as heretofore. The value of the monetary unit of countries having a gold or double standard was ascertained by comparing the amount of pure gold in *such unit with the pure gold in the United*

States dollar, and the silver coins of such countries were given the same valuation as the corresponding gold coins with which they are interchangeable by law.

In countries having a silver standard, the values of the silver coins were fixed at the commercial value of the pure silver contained in such coins.

MONETARY STATISTICS OF FOREIGN COUNTRIES.

The statistics of the coinage and production of the precious metals in foreign countries, published annually in the reports of this Bureau, are obtained directly from the governments of such countries by our representatives abroad, a fact which invests them with the highest degree of reliability, and explains why it is that the reports of the Mint Bureau have come to be recognized, the world over, as the most exhaustive and trustworthy authority on the statistics relating to these subjects.

The points on which information is sought are embodied in a set of questions in a circular sent through the Department of State to our diplomatic representatives abroad, and the answers are received in the form of a report direct to this Bureau.

The questions covering the calendar year 1890 were as follows:

(1) What was the amount of gold coined during the calendar year 1890 by denominations and values? What amount was recoined (withdrawn from circulation) during the year, domestic and foreign coins separately?

(2) Same for silver.

(3) What was the import and export of gold during the calendar year 1890? Coin, bullion, and ore should be given separately where practicable.

(4) Same for silver.

(5) What was the weight, expressed in kilograms, and the value of the gold produced from the mines during the calendar year 1890?

(6) Same for silver.

(7) What, approximately, was the stock of gold coin and bullion in the country at the close of the calendar year 1890.

(8) Same for silver.

(9) What was the amount of Government and bank notes outstanding at the same date?

(10) Were any laws passed during the year 1890 affecting the coinage, issue, or legal-tender character of the metallic and paper circulation? If so, please transmit copies.

(11) In case the report of the operations of the mint is published, please forward a copy.

These replies should be in the form of a report, written on one side of the paper only, and transmitted direct to the "Director of the Mint, Treasury Department, Washington, D. C."

Besides the information contained in the official answers to the above questions, the Bureau draws freely from other sources, especially printed documents—some official, others not—courteously transmitted to the Bureau by foreign governments. We have this year to express our acknowledgment for the receipt of: Twenty-first Annual Report of the Deputy Master of the Royal Mint, 1890, London, 1891; Mineral Statistics of the United Kingdom for 1890, London, 1891; Summaries of the Statistical Portions of the Reports of Her Majesty's Inspector of Mines, London, 1891; Report of Mr. C. Leneve Foster, Her Majesty's Inspector of Mines, London, 1891; Government of India, Financial Statement, 1891-'92, Calcutta, 1891; Report on the Administration of the Mints at Bombay and Calcutta for the year 1889-'90, Calcutta, 1891; do. for 1890-'91; Finance and Revenue Accounts and Miscellaneous Statistics Relating to the Finances of British India, Part III, Calcutta,

1891; Report of the Head Commissioner of Paper Currency, Calcutta, to the Secretary of the Government of India, for the year 1890-'91, Calcutta, 1891; Geological and Natural History Survey of Canada, Annual Report, new series, Vol. IV, 1888-'89, Montreal, 1890; Annual Report of the Secretary of Mines of Victoria during the year 1890, Melbourne, 1891; Australian Statistics 1889-'90, by T. A. Coghlan, Government Statistician, Sydney, 1890; Australian Insurance and Banking Record, 1891; Journal and Proceedings of the Royal Society of New South Wales, Sydney, 1890; Chillagoe and Koorboora Mining Districts (Report of Robert L. Jack, Government Geologist); Report of the Director of the Imperial Mint of Japan, 1890; República Mexicana, Noticias del Movimiento Marítimo en el año fiscal de 1888 á 1889, Mexico, 1891; Agencia Mercantil de la República Mexicana, Memoria Estadística de los meses Julio á Diciembre de 1890, Mexico, 1891; República Mexicana, Exportaciones en el año Fiscal de 1889 á 1890, Noticias formadas bajo la dirección de Javier Stavoli, Mexico, 1891; Monatshefte zur Statistik des Deutschen Reichs, Jahrgang 1891, Berlin, 1891; Zeitschrift für Berg-Hütten- und Salinen-Wesen im Preussischen Staate, Jahrgang 1891, Berlin, 1891; Bulletin de Statistique et de Législation Comparée, Paris, 1891; Annales des Mines, 1^e et 2^e livraisons de 1891, Paris, 1891; Revue des Banques, Paris, 1891; Algemeen Verslag van het Munt-College, over 1890, Amsterdam, 1891; Jaarcijfers over 1889 en vorige Jaren, No. 9, Amsterdam, 1891; Bidrag til Finlands Officiella Statistik, XVII Industrie-Statistik 5, År 1888, Helsingfors, 1891.

The replies to the interrogatories, which are given in full in the Appendix to this Report, are indicated by the numbers of the questions.

A brief review of the most important facts contained in the various reports received is here appended:

GREAT BRITAIN AND BRITISH COLONIES.

Great Britain and Ireland.

Items reported for 1890.	£.	Value in United States money.
Gold coinage	7,680,156	\$37,375,479
Light gold coin recoined	3,248,437	15,808,519
Silver coinage	1,712,161	8,382,232
Worn silver coin (recoinage)	296,896	1,444,844
Gold imported	23,606,128	114,879,222
Gold exported	14,309,626	69,637,795
Gain of gold by imports	9,296,502	45,241,427
Silver imported	13,022,891	63,375,899
Silver exported	10,989,895	53,482,324
Gain of silver by imports	2,032,996	9,893,575
Gold produced from ores produced in the Kingdom	675	3,285
Silver obtained from ores produced in the Kingdom	58,024	382,374
Estimated stock of precious metals in the Kingdom December 31, 1890:		
Gold	105,000,000	510,982,500
Silver	22,000,000	107,063,000
Note circulation	40,962,791	199,315,422

The gold coinage of Great Britain in 1890 comprised, in addition to sovereigns, £1,121,600 in half sovereigns, the coinage of which had been practically suspended since 1885,

Under the terms of the royal proclamation, dated November 26, 1890, issued in conformity with the coinage act of 1889, calling in the gold coins of former reigns, and declaring that such coins shall not be legal tender after February 28, 1891, the operations have resulted in the withdrawal from circulation of £2,334,573 in sovereigns and £128,575 in half sovereigns, a total of £2,463,148.

The expenses of the operation, which amounted to £51,299, are exhibited in the following table, presented in the report of the deputy master of the mint:

Where withdrawn.	Value of deficiency in weight.			Value of deficiency in standard.			Total value of deficiency.
	On sovereigns.	On half sovereigns.	Total.	On sovereigns.	On half sovereigns.	Total.	
Bank of England:	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Light coins.....	40,919 17 00	6,210 05 1	47,130 02 1	2,199 15 1	125 13 3	2,325 08 4	49,455 10 3
Full weight coins.....	625 17 10	4 11 5	630 09 3	155 17 7	0 13 10	156 11 5	787 0 8
Australia:							
Sydney mint.....	222 06 04	34 09 8	256 16 0				256 16 0
Melbourne mint.....	583 15 00	103 07 3	687 02 3	47 06 7	3 01 3	50 07 10	737 10 1
Total.....	43,351 16 02	6,352 13 5	48,704 09 7	2,402 19 3	129 08 4	2,532 07 7	51,236 17 2
Incidental expenses at—							
Sydney.....							16 15 9
Melbourne.....							46 01 4
Total expenses.....							51,299 14 3

Of the silver coins struck during the year 1890, of the nominal value of £1,712,161, £249,465 were in crowns and £156,429 in double florins. The total issue of crowns and double florins since 1887 has been:

Description.	£.	Value in U. S. money.
Crowns.....	790,885	\$3,548,842
Double florins.....	510,625	2,484,957
Total.....	1,301,510	6,333,799

The following table presented by the master of the mint is intended to show the proportion in which silver coins of the several denominations exist in the currency of Great Britain and her colonies:

Denominations.	England and Wales.		Scotland and Ireland.		Colonies.*	
	1890.	1880-'89.	1890.	1880-'89.	1890.	1880-'89.
Crowns.....	£226,000	£484,300	£28,600	£48,750	£235	£2,900
Double florins.....	118,000	320,600	20,100	28,815		23,110
Half crowns.....	281,000	1,488,200	53,900	433,400	48,150	488,410
Florins.....	33,000	608,800	34,900	330,175	112,880	811,005
Shillings.....	251,000	751,500	56,700	515,200	136,470	920,935
Sixpences.....	178,000	756,500	23,300	149,550	34,660	195,675
Threepences.....	28,175	180,400	7,500	59,150	21,820	1168,830
Total.....	1,115,175	4,680,300	225,000	1,565,040	354,315	2,610,865
Withdrawals.....	250,000	1,914,700	19,700	572,164	27,197	281,002
Net increase of currency....	865,175	2,765,600	205,300	992,876	327,118	2,229,863

* Under the heading "Colonies" is included all imperial coin shipped in aid of Treasury chests abroad.

† Including fourpences of the value of £2,000 specially struck in 1888 for British Guiana.

These statistics show a net increase of silver as currency within the last eleven years, as follows:

Countries.	£.	Value in United States money.
In England and Wales	3, 630, 775	\$17, 669, 167
In Scotland and Ireland	1, 198, 176	5, 830, 923
In Colonies	2, 556, 961	12, 443, 548
Total	7, 385, 932	35, 943, 638

Colonial coinages were executed at the Royal mint as follows:

For Hong-Kong, in silver pieces of 20, 10, and 5 cents	\$250, 000
For Hong-Kong, in half dollars	25, 000
Total	275, 000

For Newfoundland, in silver pieces of 20, 10, and 5 cents	38, 000
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The colonial coinages struck by "The Mint Birmingham" were as follows:

For Hong-Kong, a silver coinage of \$155,000 in 50, 25, 10, and 5-cent pieces; for the British East Africa Company a silver coinage amounting to 61,116 rupees (\$28,951).

Australasia.—The coinage at the mint at Melbourne, during the year 1890, all sovereigns, was £2,473,537, and of the mint at Sydney £2,808,000, all in sovereigns, a total gold coinage for Australia of £5,281,537.

Light-weight gold coins, of the value of £44,601, were received for recoinage at the mint at Sydney.

The withdrawal of pre-Victorian gold coins, in the colony of Victoria, was £32,183.

The total light-weight gold coin withdrawn in Australasia was £76,784.

Through the kindness of Mr. George Anderson, deputy master of the Melbourne branch of the royal mint, I am able to present the statistics of the product of gold in Australia and New Zealand for the calendar year, 1890.

Gross product:	Ounces.
Gold	1, 599, 350

Making the usual deduction of about 8 per cent in order to obtain the amount of pure gold actually produced, the product of gold in Australasia during the calendar year 1890, was, approximately, 1,471,402 ounces, value \$30,413,879.

India.—The silver coinage at the mints at Calcutta and Bombay during the calendar year 1890, amounted to 122,295,383 rupees.

Canada.—According to the "monetary statistics of the United Kingdom, 1890" the amount of gold and silver produced in Canada during the year 1889 was as follows:

Metals.	£.	Ounces.	Value in United States money.
Gold	250, 032	.....	\$1, 260, 579
Silver .....	.....	383, 318	495, 592

FRANCE.

Items reported for 1890.	Francs.	Value in United States money.
Coinage:		
Gold.....	20,602,800	\$3,976,340
Recoinage.....	11,999,580	2,315,919
Silver (for French colonies).....	33,345	6,436
For the Great Comoro.....	10,250	1,978
Total.....		8,414
Imports:		
Gold.....	116,726,408	22,528,197
Exports.....	249,498,004	48,153,115
Loss by export.....	132,771,596	25,624,918
Imports:		
Silver.....	127,898,631	26,614,436
Exports:		
Silver.....	107,890,319	20,822,832
Gain by imports.....	30,008,312	5,791,604
Product of mines, 1889:		
Gold.....	*400	265,840
Silver.....	*80,942	2,363,950
Gold in Bank of France January 2, 1891.....	1,120,126,439	216,184,403
Silver.....	1,240,874,500	239,488,779
Amount of currency issued by Bank of France, same date.....	3,051,751,440	568,968,028

* Kilograms.

BELGIUM.

There was no coinage of national money in Belgium during the year 1890.

The issue of bank notes by the National Bank amounted to 536,450,000 francs on December 31, 1890.

Items reported for 1890.	Kilograms.	Francs.	Value in United States money.
Imports:			
Gold.....	13,843		\$9,200,058
Jewelry.....		2,109,145	407,085
Total.....			9,607,123
Exports:			
Gold.....	294		195,392
Jewelry.....		60,631	11,702
Imports:			
Silver.....	247,042		10,267,086
Silverware.....		1,066,637	321,661
Total.....			10,588,727
Exports:			
Silver.....	27,592		1,142,963
Silverware.....		46,870	9,046
Total.....			1,152,029

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By royal decree a permanent commission has been appointed in Belgium for the investigation of monetary questions.

SWITZERLAND.

Items reported for 1890.	France.	Value in United States money.
Gold coinage.....	2,500,000	\$482,500
Silver (recoinage).....	1,450,000	279,850
Imports:		
Gold.....	31,702,336	6,118,551
Silver.....	44,157,460	8,552,890
Exports:		
Gold.....	6,856,517	1,226,808
Silver.....	19,916,040	3,848,796

The stock of gold in the Swiss banks of issue amounted on December 31, 1890, to 61,414,835 francs, and of silver 23,475,820 francs.

The notes in circulation at same date were 168,397,200 francs.

ITALY.

Items reported for 1890.	Lire.	Value in United States money.
Gold coinage.....	1,864,400	\$263,329
Silver (all recoinage).....	5,655	1,061
Coinage for colony of Eritrea.....	2,942,043	567,814
Imports:		
Gold.....	9,913,600	1,913,325
Exports:		
Gold.....	19,778,300	3,817,213
Loss by export.....	9,864,700	1,903,887
Imports:		
Silver.....	48,090,000	9,281,870
Exports:		
Silver.....	48,948,760	9,447,111
Loss by export.....	858,760	165,741
Gold in Treasury and banks December 31, 1890.....	457,167,209	88,233,271
Silver.....	105,328,608	20,328,421
Notes in circulation.....	1,409,249,677	283,565,188

GREECE.

Items reported for 1890.	Drachmas.	Value in United States money.
Stock of gold coin.....		\$100,000
Stock of silver coin.....		700,000
Paper money.....	126,450,158	24,404,881

SPAIN.

Items reported for 1890.	Pesetas.	Value in United States money.
Gold:		
Coinage.....	46,888,960	\$9,049,569
Recoinage.....	2,428,397	487,716
Silver:		
Recoinage.....	7,664,000	1,479,152
Imports:		
Gold (bars).....	*7,654	5,086,848
Coin.....	3,252,233	637,661
Total.....		5,714,539
Imports:		
Silver (bars).....	*68	2,526
Coin.....	4,687,708	904,728
Total.....		907,554
Exports:		
Silver.....	†252	1,047
Notes outstanding.....	730,935,000	141,070,455

* Kilograms.

† Hectograms.

PORTUGAL.

Items reported for 1890.	Milreis.	Value in United States money.
Gold coinage (all recoinage).....	377,000	\$407,160
Silver coinage (all recoinage).....	500,000	540,000

GERMANY.

Items reported for 1890.	Kilograms.	Marks.	Value in United States money.
Gold:			
Coinage.....		100,149,210	\$28,835,512
Recoinage (imperial gold).....		404,230	96,207
Coin (foreign)..... 6,306 fine pounds ..			2,095,484
Imports.....	39,865		25,494,279
Exports.....	16,290		10,826,334
Gain by imports.....	23,575		15,667,945
Silver:			
Imports.....	66,003		2,743,085
Exports.....	282,400		11,736,544
Pagament:			
Imports.....		13,621,000	3,241,798
Exports.....		16,000	3,808
Product of German smelting works:			
Gold.....		5,151,000	1,225,938
Silver.....		56,060,000	13,342,280
Notes outstanding December 31, 1890:			
Imperial notes.....		122,908,940	29,262,828
Bank notes.....		1,204,817,000	308,196,446

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AUSTRIA-HUNGARY.

Items reported for 1890.	Kilograms.	Florins.	Value in United States money.
Coinage:			
Gold		5,848,080	\$2,818,750
Recoinage		1,913,729	922,417
Silver coinage		8,002,320	3,857,118
Recoinage		1,926,007	928,653
Gold:			
Imports	43,820		28,458,172
Exports	17,338		11,519,512
Net gain	26,487		16,938,660
Silver:			
Imports	41,828		1,738,871
Exports	11,000		485,836
Net gain	30,138		1,253,035
Gold in Government vaults		8,210,316	3,957,372
Do Austria-Hungarian Bank		54,047,000	26,050,654
Silver in Government vaults		9,002,307	4,282,521
Silver in Austria-Hungarian Bank		165,476,000	79,758,482
Bank notes outstanding:			
State notes		870,861,108	178,514,062
Bank notes		445,934,210	214,940,289
Gold product of mines, Austria	12,452		8,276
Hungary	2,081,082		1,389,720
Silver product of mines:			
Austria	34,629,797		1,480,214
Hungary	15,983,543		684,276

NETHERLANDS.

Items reported for 1890.	Florins.	Value in United States money.
Coinage:		
Silver	495,000	\$198,900
Recoinage	210,000	84,420
Imports:		
Gold	6,527,245	2,622,953
Exports:		
Gold	567,557	228,158
Gain by import	5,959,688	2,395,795
Silver:		
Imports	1,372,695	551,823
Exports	7,871,500	3,083,943
Loss by export	6,498,805	2,532,120

Gold stock, 47,594,460 florins, of which 23,291,720 florins were in the Bank of the Netherlands.

Silver stock, 116,713,423 florins, of which 7,616,174 were in subsidiary coin.

Total metallic stock, 164,307,883 florins, of which 65,498,690 florins were in the Bank of the Netherlands.

Note circulation, 15,000,000 florins in Government notes and 195,160,615 in bank notes, a total of 210,160,615 florins.

SCANDINAVIAN UNION.

Items reported for 1890.	Kilograms.	Crowns.	Value in United States money.
DENMARK.			
Gold:			
Coinage.....		2,044,520	\$547,931
Imports.....		3,500,000	938,000
Exports.....		2,500,000	670,000
Net gain by imports.....		1,000,000	268,000
Estimated stock of gold.....		47,000,000	12,596,000
Estimated stock of silver.....		20,000,000	5,360,000
Bank notes in circulation.....		79,000,000	21,172,000
NORWAY.			
Silver coinage.....		450,000	120,600
Recoinage.....		76,000	20,368
Gold and silver:			
Imports.....		357,400	95,783
Exports.....		52,500	14,070
Silver product.....	5,538.9		230,197
Precious metals in Bank of Norway, December 31, 1890:			
Gold.....		30,160,700	8,083,068
Estimated stock of gold.....		15,860,670	4,250,660
Estimated stock of silver.....		6,032,000	1,616,576
Bank notes in circulation.....		49,670,700	13,311,748
SWEDEN.			
Coinage:			
Gold.....		3,109,820	833,432
Silver.....		947,264	253,867
Recoinage silver.....		405,110	108,569
Gold imports:			
Coin.....		9,060	2,428
Bars.....	102		67,789
Gold exports.....	1		665
Silver imports:			
Coin.....		633,662	169,821
Bars.....	2,429		100,949
Silver exports—bars.....	652		27,097
Silver exports; coin.....		128,000	34,304
Product of mines:			
Gold.....	87.66		58,259
Silver.....	4,181		173,762
Gold in banks and mint.....		24,951,727	6,687,063
Silver coins in circulation.....		17,521,398	4,695,735
Notes outstanding.....		103,965,415	27,870,771

RUSSIA.

Items reported for 1890.	Kilograms.	Poods.	Roubles.	Value in United States money.
Coinage:				
Gold.....			28, 150, 090	\$21, 726, 239
Silver.....			2, 091, 763	1, 614, 422
Total.....				23, 340, 661
Silver (recoinage).....			562, 000	433, 752
Gold:				
Imports.....		1, 243		13, 531, 895
Exports.....		1, 337		14, 555, 224
Loss by export.....		94		1, 023, 329
Silver:				
Imports.....		10, 637		7, 241, 389
Exports.....		6, 070		4, 132, 296
Gain by import.....		4, 567		3, 109, 093
Product of mines:				
Gold.....	31, 841. 257			21, 161, 700
Silver.....	13, 665. 836			568, 000
Total.....				21, 729, 700
Gold and silver held by State Bank Jan. 1, 1891.....			445, 968, 176	344, 198, 238
Government notes outstanding.....			1, 046, 295, 384	807, 530, 777

ROUMANIA.

Roumania adopted the gold standard in March, 1890, the law requiring the replacement of 40,000,000 francs of the 5 lei silver currency with gold coin.

About 25,000,000 francs in silver have been withdrawn from circulation and sold.

The holders of silver 5 lei pieces have the right to demand gold in exchange for a period of a year from the date of the law, after which period silver coins are a limited tender.

TURKEY.

A gold coinage of the value of 10,200 Turkish pounds was struck at the imperial mint during the year 1890. (Value in United States money \$44,830.)

ARGENTINE REPUBLIC.

Items reported for 1890.	Value.
Gold imports.....	\$6, 925, 384
Silver imports.....	163, 017
Exports.....	775, 529
Products of mines:	
Gold.....	81, 939
Silver.....	610, 142
Estimate stock of gold.....	13, 229, 468
Estimate stock of silver.....	200, 000
Bank notes in circulation.....	254, 171, 645

PERU.

Items reported for 1890.	Kilograms.	Value.
Coinage (1889):		
Silver.....		\$2, 842, 530
Exports:		
Gold.....	139	92, 379
Silver.....	88	3, 657
Silver sols.....		1, 299, 783
Total.....		1, 303, 439
Coinage (1890):		
Silver.....		2, 687, 118
Exports:		
Gold bars.....	103	68, 454
Silver bars.....	1, 135	47, 171

VENEZUELA.

Items reported for 1890.	Value.
Gold product (11 months).....	\$1, 080, 977
Bank notes outstanding 3,760,000 bolivars.....	725, 080

BOLIVIA.

The United States minister reports that there is no gold in circulation in Bolivia, but there are about \$200,000 in silver in bank.

The amount of Government and bank notes outstanding December 31, 1889, was \$4,393,184.

MEXICO.

Items reported for 1890.	Value.
Exports:	
Gold bullion.....	\$529, 515
Silver ore and bullion.....	15, 656, 111
Deposits at the mints:	
Gold.....	237, 053
Silver.....	25, 258, 785
Coinage calendar year:	
Gold.....	284, 859
Silver.....	24, 081, 192

COLOMBIA.

Items reported for 1890.	Kilograms.	Value.
Paper circulation.....		\$12, 000, 000
Silver coin in circulation.....		4, 250, 000
Gold exports.....		4, 338, 872
Silver imports.....	1, 004	82, 871
Silver exports.....		1, 457, 985

A very valuable table will be found in the Appendix, prepared by Dr. Vicente Restrepo, upon the production of gold and silver in Colombia from 1887 to 1890 inclusive.

This eminent statistician places the product of 1889 at \$4,042,000, of which \$612,000 were silver; in 1890, at \$4,430,000, of which \$735,000 were silver.

NICARAGUA.

Items reported for 1890.	Ounces.	Value in United States money.
Gold exports	10,990	\$227,163
Silver imports		307,373
Silver exports		273,424
Gold product		164,861
Paper circulation:		
Treasury notes		99,049
Bank notes		570,000
Total		669,049

HAYTI.

Items reported for 1890.	Value.
Stock of gold	\$2,300,000
Stock of silver	2,800,000
Paper circulation	4,102,875

HAWAIIAN ISLANDS.

Items reported for 1890.	Value.
Import of gold	\$776,000
Stock of gold	3,000,000
Stock of silver	1,000,000
Government notes	137,000

JAPAN.

Items reported for 1890.	Ounces or kilograms.	Yen.	Value in United States money.
Coinage:			
Gold		1,194,050	\$1,194,050
Silver		7,296,645	7,296,645
Silver recoinage	870		1,125
Imports of gold:			
Bullion	15,811		326,813
Foreign coin		623	623
Total			327,436
Exports		1,682,608	1,682,608

JAPAN—continued.

Items reported for 1890.	Ounces or kilograms.	Yen.	Value in United States money.
Silver imports:			
Bullion	308, 018		\$398, 245
Foreign coin		383, 079	383, 079
Total			781, 324
Exports:			
Silver coin		12, 079, 812	12, 079, 812
Bullion	8, 813		11, 394
Total			12, 091, 206
Product of mines:			
Government mines (gold)	26, 756		17, 782
Government mines (silver)	708, 594		29, 449
Stock of gold		88, 468, 182	88, 468, 182
Stock of silver		60, 205, 516	60, 205, 516
Government and bank notes outstanding:			
Government		33, 272, 714	33, 272, 714
National bank		25, 810, 720	25, 810, 720
Bank of Japan (convertible silver notes)		75, 709, 157	75, 709, 157

* Kilograms.

CHINA.

It is reported that silver coins, consisting of dollars of the fineness of .900, and half-dollars, and 20, 10, and 5 cent silver pieces of a lower grade of fineness were struck at the mint at Canton during the year 1890.

According to the assays of the coins, published in the report of the Deputy Master of the Royal Mint, London, the degrees of fineness were: for the dollar, 884.2; half-dollar, 848.2; and of the smaller denominations 807.3, 808, and 811.1, respectively, showing that the coins differ very largely in fineness from standard, and the weights of the coins are said to be fairly correct.

WORK OF THE BUREAU OF THE MINT.

The work of the Bureau of the Mint during the last fiscal year was well and faithfully performed.

Owing very largely to the importance which coinage and currency questions have assumed in national legislation, the work of the Bureau has been unusually heavy, requiring, in addition to the regular work, the compilation of a vast amount of statistical matter.

All of this work has been cheerfully met and promptly performed by the small clerical force at my disposal without any increase of force.

I am, very respectfully, yours,

EDWARD O. LEECH,
Director of the Mint.

Hon. CHARLES FOSTER,
Secretary of the Treasury.

* * * * *

REPORT OF THE COMPTROLLER OF THE CURRENCY.

TREASURY DEPARTMENT,
OFFICE OF THE COMPTROLLER OF THE CURRENCY,
Washington, D. C., December 7, 1891.

SIR: I have the honor to submit for the consideration of Congress, in compliance with the provisions of section 333 of the Revised Statutes of the United States, the twenty-ninth annual report of the Comptroller of the Currency.

The year covered by this report ended October 31, 1891. During the larger part of this period severe depression was experienced in all sections of the country, and business in its various forms was contracted in volume and unsatisfactory in results.

At the opening of the report year the stringency which characterized the money market during the autumn of 1890 was at its height, its most disastrous effects having been felt during the month of November. A period of liquidation then set in which had hardly spent its force when the bountiful harvest of 1891 brought much needed relief.

Notwithstanding the unfavorable conditions indicated, 193 new banks were organized during the year, located in 41 States and Territories, and possessing an aggregate capital of \$20,700,000. The accessions are numerically in excess of the average and have been exceeded in only seven out of the twenty-nine years during which the system has been in operation. During this twelvemonth 41 banks went into voluntary liquidation and 25 became insolvent, leaving as a net gain for the report year 127 associations, with a capital of \$12,553,000, which is, as to number of banks, precisely the net average yearly increase during the life of the system.

The number of banks now in operation is greater than at any former period. There has been a satisfactory increase in the totals of capital stock, surplus fund, and undivided profits, and this is also true of deposits, loans and discounts.

The number of banks in existence October 31, 1891, was 3,694, having in capital stock \$684,755,865; bonds deposited to secure circulation, \$152,113,850; bank notes outstanding, \$171,368,948, including \$35,430,721 representing lawful money deposited to redeem circulation still outstanding. The amount of circulation secured by the pledge of United States bonds has increased during the year \$11,795,101.

The following table gives the number of banks organized during the year ended October 31, 1891, in each State and Territory, with their aggregate capital:

States and Territories.	No. of banks.	Capital.	States and Territories.	No. of banks.	Capital.
Texas	17	\$1,510,000	South Dakota	5	\$300,000
Pennsylvania	17	1,050,000	Virginia	5	400,000
Washington	11	700,000	Florida	4	200,000
Illinois	11	2,830,000	North Dakota	4	250,000
Iowa	11	775,000	Massachusetts	3	350,000
Nebraska	10	910,000	North Carolina	3	150,000
New York	10	2,200,000	Oregon	3	350,000
Kansas	9	700,000	Tennessee	3	450,000
Kentucky	6	415,000	West Virginia	3	285,000
Maryland	6	1,150,000	Georgia	2	300,000
Minnesota	6	300,000	Colorado	2	300,000
Montana	6	515,000	Louisiana	2	100,000
Wisconsin	6	450,000	Maine	2	125,000
Missouri	5	1,850,000	Michigan	2	150,000
Ohio	5	650,000	New Mexico	2	100,000

States and Territories.	No. of banks.	Capital.	States and Territories.	No. of banks.	Capital.
Utah.....	2	\$100,000	Mississippi.....	1	\$50,000
District of Columbia.....	1	200,000	New Hampshire.....	1	50,000
Alabama.....	1	50,000	New Jersey.....	1	50,000
Arkansas.....	1	50,000	Wyoming.....	1	50,000
Idaho.....	1	75,000			
Indiana.....	1	100,000	Total.....	193	20,700,000
Indian Territory.....	1	50,000			

It will be observed that Texas and Pennsylvania still stand at the head of the list, as they have during the past two years, with 17 new associations in each, Texas, however, having the larger capital. Following these come the States of Washington, Illinois, and Iowa with 11 banks each, and Nebraska and New York with 10 each. Kansas shows 9 new associations and ranks next to New York. It will be observed that notwithstanding the fatality attending banking operations in Kansas and Nebraska these States take prominent places in point of new organizations.

Of the associations entering the system during the year, 99, or slightly more than one-half in number, are located west of the Mississippi River and 59 in the Southern States.

Of the total number of banks in operation Pennsylvania has the greatest number of associations, Massachusetts the greatest aggregate capital, and New York leads in amount of deposits.

The accessions to the system are widely distributed, both old and new States being prominent in the list. It will be noticed, however, that in proportion to population the increase is greater in the newer States west of the Mississippi River.

The following table exhibits the number of banks organized, failed, and in voluntary liquidation, and the net increase numerically each year since 1863:

NUMBER AND AUTHORIZED CAPITAL OF BANKS ORGANIZED AND THE NUMBER AND CAPITAL OF BANKS CLOSED IN EACH YEAR ENDED OCTOBER 31 SINCE THE ESTABLISHMENT OF THE NATIONAL BANKING SYSTEM, WITH THE YEARLY INCREASE OR DECREASE.

Year.	Organized.		Closed.				Net yearly increase.		Net yearly decrease.	
			In voluntary liquidation.		Insolvent.					
	No.	Capital.	No.	Capital.	No.	Capital.	No.	Capital.	No.	Capital.
1863.....	134	\$16,378,700	---	---	---	---	134	\$16,378,700	---	---
1864.....	453	79,366,950	3	---	---	---	450	79,366,950	---	---
1865.....	1,014	242,542,982	6	\$330,000	1	\$50,000	1,007	242,162,982	---	---
1866.....	62	8,515,150	4	650,000	2	500,000	56	7,365,150	---	---
1867.....	10	4,260,300	12	2,160,000	6	1,170,000	---	900,300	8	---
1868.....	12	1,210,000	18	2,445,500	4	410,000	---	---	10	\$1,645,500
1869.....	9	1,500,000	17	3,372,710	1	50,000	---	---	9	1,922,710
1870.....	22	2,736,000	14	2,550,000	1	250,000	7	---	---	64,000
1871.....	170	19,519,000	11	1,450,000	---	---	159	18,069,000	---	---
1872.....	175	18,988,000	11	2,180,500	6	1,806,100	158	15,001,400	---	---
1873.....	68	7,602,700	21	3,524,700	11	3,825,000	36	253,000	---	---
1874.....	71	6,745,500	20	2,795,000	3	250,000	48	3,700,500	---	---
1875.....	107	12,104,000	38	3,820,200	5	1,000,000	64	7,283,800	---	---
1876.....	36	3,180,800	32	2,565,000	9	905,000	---	---	5	340,200
1877.....	29	2,680,000	29	2,539,600	10	3,344,000	---	---	7	3,294,600
1878.....	28	2,775,000	41	4,237,500	14	2,612,500	---	---	27	4,075,000
1879.....	38	3,595,000	33	3,750,000	8	1,230,000	---	---	3	1,385,000
1880.....	57	6,374,170	9	570,000	3	700,000	45	5,104,170	---	---
1881.....	86	9,651,050	26	1,920,000	---	---	60	7,731,050	---	---
1882.....	227	30,038,300	78	16,120,000	3	1,561,300	146	12,357,000	---	---
1883.....	262	28,634,350	40	7,736,000	2	250,000	220	20,668,350	---	---
1884.....	191	16,042,230	30	3,647,250	11	1,285,000	150	11,100,980	---	---

NUMBER AND AUTHORIZED CAPITAL OF BANKS ORGANIZED, ETC.—Continued.

Year.	Organised.		Closed.				Net yearly increase.		Net yearly decrease.	
			In voluntary liquidation.		Insolvent.					
	No.	Capital.	No.	Capital.	No.	Capital.	No.	Capital.	No.	Capital.
1865.....	145	\$16,938,000	85	\$17,856,500	4	\$600,000	50			\$1,518,590
1866.....	174	21,358,000	25	1,651,100	8	650,000	141	189,056,000		
1867.....	225	30,546,000	25	2,537,450	8	1,550,000	102	26,458,550		
1868.....	132	12,053,000	34	4,171,000	8	1,900,000	90	5,982,000		
1869.....	211	21,240,000	41	4,316,000	2	250,000	168	16,674,000		
1870.....	307	36,250,000	50	5,050,000	9	750,000	248	30,450,600		
1871.....	193	20,700,000	41	4,483,000	25	3,662,000	127	12,553,000		
Total.....	4,648	683,463,182	791	108,431,000	164	30,620,900	3,762	558,656,782	69	14,245,500
Defect decrease.....							69	14,245,500		
Total net increase.....							13,693	\$544,411,282		

¹One bank restored to solvency, making 3,694 going banks.

²The total authorized capital stock on October 31 was \$684,755,865; the paid-in capital, \$683,248,175, including the capital stock of liquidating and insolvent banks which have not deposited lawful money for the retirement of their circulating notes.

The most notable feature of the foregoing table is the large number of associations which have become insolvent during the year. They aggregate 25 banks, with a capital of \$3,662,000. The year 1873, however, appears to have been the most disastrous in point of capital, as during that period the failure of 11 banks, with a capital of \$3,825,000, is recorded. The next in point of importance was 1877, when ten failures occurred, representing a capital of \$3,344,000.

If we consider the relative proportions existing between the liabilities of failed and active banks during various periods, it will be found that seven years have been more disastrous than the one just closed, to wit: 1867, 1872, 1873, 1877, 1878, 1882, and 1884. The liabilities of banks closed on account of insolvency in each of these seven years constitutes a larger percentage of the total liabilities of all existing banks than is shown by the record of the year covered by this report.

Of the 25 failed banks, having an aggregate capital of \$3,662,000, 13, representing \$1,137,000 of capital, were located in Kansas and Nebraska.

The larger part of the failures in these two States were attributable to four successive crop failures, and seem to be the result of unavoidable misfortunes rather than the lack of honest and efficient management. In many cases, however, the unfavorable conditions were greatly aggravated by the collapse of unwise speculation in real estate, more especially in city and suburban property.

The Comptroller endeavored by correspondence with various State officers, receivers, and assignees to ascertain the number of failures of banks and bankers other than national during the past twelve months, but was unable to thus secure data upon which reliance could be placed. He has been supplied, however, through the courtesy of a commercial agency,* with a list of failures in the United States of bankers, brokers, trust companies, and savings banks for the year ended June 30, 1891. These number in all 117 institutions, having liabilities estimated at \$38,271,511, and assets valued at \$20,794,092.

No reliable data in relation to the losses to creditors by reason of the failure of banks other than national for recent years is accessible. In order that a comparison may be made between the comparative safety of national and State systems I am led to quote from the report of Hon.

*Bradstreet.

John Jay Knox, then Comptroller of the Currency, for the year 1879, where the subject is discussed. He says:

There is no means of definitely determining the amount of losses sustained through the failures of banks operating under systems in vogue during the earlier periods of the history of this country. The losses under those systems, both to the noteholders, to whom there can be no loss under the national system, and to their general creditors and shareholders, are known to have been large. The loss to noteholders alone is estimated to have been 5 per cent annually upon the total amount of circulation outstanding. In Elliot's Funding System, on page 1176, it is stated that fifty-five banks with an aggregate capital of \$67,036,265 and circulation of \$23,577,752, failed in 1841. The total bank capital of that year is stated by the same authority to have been \$317,642,692, and the circulation at \$121,665,198; and it is also stated in the same connection that in nearly every instance the entire capital of the banks which failed was lost.

Numerous failures of private banking firms have occurred in this country within the last six years, and the losses consequent upon three or four of them are equal to the total losses which have occurred under the national system.

For the purpose of comparing the losses to creditors of insolvent national banks with those sustained by the creditors of insolvent banks other than national, much pains have been taken by the Comptroller to obtain as reliable and complete statistics as possible relating to the failures of State and savings banks and private bankers in the different States during the three years ending January 1, 1879. The results of his labors in this direction are to be found in the following table:

State and city.	No. of banks.	Claims.	Amount paid and to be paid.	Losses.
Maine.....	17	\$5,127,995	\$4,370,524	\$757,471
New Hampshire.....	11	4,864,216	3,622,804	1,241,412
Massachusetts.....	11	4,436,457	2,670,158	1,766,299
Boston.....	3	5,551,186	3,989,799	1,561,387
Rhode Island.....	13	12,601,826	10,746,554	1,855,270
Connecticut.....	7	3,960,821	2,060,805	1,894,016
New York.....	8	1,236,567	332,081	904,486
New York City.....	20	27,978,099	22,185,547	5,793,152
Pennsylvania.....	6	1,346,083	819,000	567,083
New Orleans.....	3	1,597,393	277,638	1,319,755
Kentucky.....	3	325,380	161,690	164,190
Ohio.....	18	3,054,135	1,138,085	1,916,050
Indiana.....	4	466,233	281,778	184,455
Illinois.....	40	10,038,221	3,915,160	6,123,062
Michigan.....	11	637,407	135,372	502,035
Iowa.....	7	730,786	85,260	645,526
Minnesota.....	1	78,000	45,708	32,292
Missouri.....	5	Not given	Not given	2,300,000
Kansas.....	8	337,082	97,373	271,207
Nebraska.....	5	110,000	24,000	183,271
Colorado.....	1	90,000	31,500	58,500
California.....	7	3,786,541	1,137,783	2,648,758
Dakota.....	1	45,000	18,000	27,000
Total.....	210	88,440,028	58,152,638	32,616,661

The amount of claims of five banks in Missouri, one in Kansas, and two in Nebraska could not be obtained.

In the foregoing table it has been found impossible to give the capital, or the exact amount of dividends paid to creditors, the liabilities and the losses only having been ascertained with any degree of accuracy. The differences between the two items last named represent the amount which it is assumed will eventually be paid to creditors. The average annual loss sustained by creditors during the past sixteen years by the insolvency of national banks throughout the United States has been \$390,012, and that occasioned by the failures of banks other than national, as shown by the incomplete data obtained by the Comptroller, has for the last three years been not less than \$10,872,220.

In the States of Ohio and Illinois alone the losses during the last three years, through the failure of State, savings, and private banks and bankers, aggregated \$8,039,102, of which \$1,916,050 were in Ohio, and \$6,123,052 in Illinois. The total loss in these two States is greater by \$1,798,913 than the total loss to creditors by all the national bank failures which have ever occurred.

The failures for the current year have been numerous, many having been characterized by gross mismanagement and some by criminality of an aggravated character, yet nothing has been developed which indicates that the confidence in national banks on the part of the general public, which is the outgrowth of an experience of twenty-nine years, has been ill founded.

It is idle to suppose that absolute immunity from failure can be secured by the operation of any law which fails to provide for absolute and complete governmental guaranty. That failures will be far more numerous during some years than others is to be expected. This is true of every variety of business activity. The banks of the country are mere agencies through which the commercial and business operations of the people are conducted, and of necessity the losses which attend these operations are reflected in the profit and loss accounts of these agencies. The net earnings of the banks afford a good criterion for judging as to the measure of success which has attended the business operations of their customers.

It is a well-known fact that periods of business activity and depression follow each other at reasonably well-defined intervals, and that no means have been found for preventing the regular recurrence of what were under other conditions, known as years of panic. There is no doubt that the introduction of the national banking system and a well-secured currency of uniform and certain value, has served to greatly modify the severity of these periodical visitations and convert what were formerly panics into more or less severe depressions. The latter condition we have just experienced, and it is not remarkable that during the past twelve months while the country was suffering from a monetary stringency which has seriously affected the entire commercial world, we should have witnessed the failure of 25 banks out of a total of 3,694.

That the law under which these associations operate is absolutely perfect no one well informed will claim, but that it has afforded greater security to its depositors and creditors than any other system is indisputable.

Since the foundation of the system 4,648 associations have been organized, of which 164 have become insolvent, equal to about 3½ per cent for a period of twenty-nine years. Of this number the affairs of 102 have been finally settled, representing \$28,544,992 of proved claims, upon which the claimants have received on an average 74.17 per cent, constituting a net loss to depositors of \$7,372,036. The affairs of 62 banks are still unsettled, representing claims proved to the amount of \$29,247,036, on which have been paid \$17,456,167, leaving assets estimated at \$3,702,925 yet to be distributed, which would represent a loss to creditors of \$8,087,944.

It will be observed that losses to creditors of national banks during the twenty-nine years of the existence of the system, taking the amounts ascertained and the amounts estimated, aggregate \$15,459,980, or an average of \$533,103 per annum during the life of the system.

The average amount of liabilities of all the banks since 1863 approximates \$1,055,434,022, indicating that the annual average loss to the creditors of national banks for the period of twenty-nine years has been only one-twentieth of 1 per cent.

In order to illustrate the increasing economy and efficiency which has characterized the administration of insolvent banks by the Bureau, the following table has been prepared, which covers all insolvent associations whose affairs have been finally closed;

Date of failure in semi-decades.	No. of failed banks.	Total collections from all sources.	Legal expenses.		Receivers' salaries, and all other expenses.		Amount of claims proved.	Percentage of dividends on claims proved.
			Amount paid.	Ratio to total collections.	Amount paid.	Ratio to total collection.		
1865 to 1869, inclusive...	15	\$3,870,087	\$155,959	4.03	\$343,343	9.13	\$5,131,094	62.84
1870 to 1874, inclusive...	21	10,384,725	290,855	2.89	579,495	5.58	9,876,423	75.01
1875 to 1879, inclusive...	41	9,353,475	317,737	3.39	676,526	7.23	9,646,132	72.65
1880 to 1884, inclusive...	9	1,534,720	44,561	2.90	109,162	7.11	1,407,231	85.75
1885 to 1890, inclusive...	16	3,735,929	30,374	.81	122,195	3.27	2,483,512	90.65
Total	102	28,877,937	848,486	2.94	1,830,721	6.34	28,544,992	74.17

It will be observed that the banks have been classified into semi-decades, having regard to the date of insolvency. The conspicuous relative reduction in legal expenses is worthy of remark. The first semi-decade shows an average disbursement for legal expenses of \$4.03 on each \$100 collected, while the same item during the last semi-decade is stated at only 81 cents.

The average expenses to each \$100 of collections for receivers' salaries and all other expenses decreased from \$9.13 during the first semi-decade to \$3.27 during the last. Taking into account all the expenses of administration, we find that the cost per \$100 during the last period is \$4.08, as against \$13.16 during the first. A corresponding increase in the percentage of dividends paid to the creditors of insolvent banks is also to be noted.

During the first period, claimants received on the average 62.84 per cent; during the last period 90.65 per cent, and for the entire life of the system 74.17 per cent.

The increase in dividends and decrease in expenses go hand in hand. The increase in rate per cent paid to creditors is due in part to greater efficiency and economy in conducting the liquidations, and partly to the fact that recent failures are less disastrous than in the earlier years of the system. These results indicate that governmental supervision is growing more effective as new and improved methods are evolved from experience. Certainly no other system of liquidating insolvent banks has ever proved so effective and economical; the record of the past five years showing average dividends to creditors of 90.65 per cent, and average expenses of only 4.03 per cent is in both respects believed to be without a parallel.

AMENDMENTS TO PRESENT LAW.

The Comptroller desires to repeat in substance the recommendations contained in his report for 1890.

In his opinion the present law should be so amended as to provide:

- (1) That no association shall be required to maintain a bond deposit of more than \$1,000 to secure circulation.
- (2) That every association may issue circulating notes equal to the par value of the bonds so deposited.
- (3) That the monthly withdrawal of bonds pledged to secure such notes shall not exceed \$3,000,000 in the aggregate.
- (4) That the semi-annual duty on circulation be so reduced as to equal one-fourth of 1 per cent per annum.

These recommendations are made upon the supposition that Congress will not favorably consider measures looking to any considerable in-

crease of circulation through further note issues by national banks. While the Comptroller is of the opinion that bank notes possess certain qualities not found in any form of governmental issues, but which are necessary to a perfect circulating medium, he is, nevertheless, aware that the present is not an opportune time for presenting his views upon that subject. He deems it wise to accept the situation, so far as note issues are concerned, and ask for such legislation as will relieve national banks so far as possible from the enforced and unremunerative issue of circulating notes, so that they may be unembarrassed in their efforts to faithfully serve the public as banks of discount and deposit.

Inasmuch as the secured circulation of national banks has increased \$11,795,101 during the report year and is now much above the present minimum requirement, no rapid contraction of circulation need be apprehended.

The limitation provided in the third proposition would in any event prevent a retirement beyond \$3,000,000 per month. Such reduction as might otherwise take place would be neutralized for five months at least by the immediate additional issue of \$15,211,385 under the second proposition.

The reduction of the semi-annual duty is both just and expedient. No adequate reason can be given for the taxation of a valueless and unwelcome franchise for the purpose of swelling redundant revenues.

MONETARY STRINGENCY OF 1890.

The previous report year, which ended November 1, 1890, showed a comparatively small number of failures of national banking associations. Up to Midsummer of 1890 that year had been one of more than average business activity. It was, however, apparent in the early Spring, to those who were most observant of passing events, that unfavorable conditions existed, the evil effects of which would appear in the near future. This arose from consideration of the fact that agricultural interests were in an unsatisfactory condition, and also that overtrading and unhealthful expansion were everywhere apparent. During the year the building of railroads had been prosecuted with unusual vigor, making necessary the placing of unusually large lines of securities.

Immense sums heretofore available as loanable capital in the New England and Middle States had taken a fixed form by reason of investments in the Mississippi Valley and upon the Pacific coast in city and suburban property, in loans represented by farm mortgages, and in the stocks and bonds of unnumbered corporations organized for the purpose of conducting various kinds of manufacturing operations, and supplying water, light, and rapid transit to the inhabitants of the many rapidly growing cities and villages in the regions named. Not only did these enterprises attract capital from the Atlantic States, but English investors brought to this country vast sums for the purpose of grouping together and recapitalizing corporations engaged in manufacturing, industrial, and commercial pursuits.

This unexampled movement of capital toward the West not only divested the Atlantic States in a large degree of the loanable funds heretofore available for the relief of those engaged there in manufacturing and in business in its various forms, but it also had its effect upon the West in unduly stimulating speculative operations in real estate and laying the groundwork for the future collapse in prices which it was apparent must follow whenever the flow of money toward the field of these operations should for any cause be greatly diminished or entirely arrested.

The various banking institutions located in the region of country affected by the speculative spirit thus incited became necessarily more or less involved in the operations of their local customers. They found themselves early in the Summer of 1890 carrying large lines of loans representing investments in various forms of corporate enterprises, which were in a large degree in untried fields and dependent for success upon the rapid growth of towns and cities, yet unrealized. The banks of the country were therefore in an unduly extended condition upon the approach of Midsummer, and dependent in many cases upon rediscounts with their correspondents in the reserve cities in order to enable them to carry the heavy lines with which they were burdened. While in this condition the transfer of funds to this country from England and the Continent became at first greatly reduced in volume, and finally ceased. Not only was the supply of fresh funds from this source cut off, but it was discovered that during the late Spring and early Summer months, as well as later on, vast amounts of American securities held abroad were forced upon the New York market by European holders for the purpose of preparing for a collapse which was expected to result from similar conditions of undue expansion existing abroad. The Continental countries had already passed through a period of liquidation and loss consequent upon the failure of the Panama Canal Company and the French Copper Syndicate. England, by reason of unusually large investments in all parts of the world, and especially in the Argentine Republic, was gradually but surely approaching an exceptionally severe monetary stringency.

As an evidence of this and the consequent disposition to increase the stock of gold there held, in order to strengthen their cash resources, it is noted that during the months of June, July, and August of last year the net exportation from the United States of gold coin and bullion exceeded \$14,000,000, and for the period extending from January 1, 1890, to August 31, 1891, the net exportations of gold amounted to \$75,405,613. While these causes were operating to prevent the necessary relief from reaching us from Europe, the demands upon the banks in New York and other large reserve cities rapidly increased, producing a reduction in the amount of deposits and an increase in the amounts loaned to and rediscounted for the interior banks.

The gross deposits of forty-six national banks in the city of New York show a falling off of \$44,831,356 between the 28th of February and 17th of May, 1890; \$13,519,527 of this representing a reduction in balances due to interior banks and those located in other reserve cities, while the reduction in loans and discounts was less than \$10,000,000. The New York banks, however, were enabled to so strengthen their positions during the months of June and July that the marked stringency was delayed until August. It culminated about the middle of November, when the failure of a leading firm of brokers, the embarrassment of one large State bank, and the failure of another occurred in New York. These events were simultaneous with the announcement of the embarrassment of the Baring Brothers, of London, and the fact that a syndicate had been formed, headed by the Bank of England, through whose agency Baring Brothers' obligations were guaranteed to the extent of about \$75,000,000.

The unsatisfactory condition of monetary affairs in England, and the desire to be prepared for the effect of the announcement of the embarrassment of the Baring Brothers, induced the Bank of England to borrow £3,000,000 in gold from the Bank of France, in addition to £1,500,000 received from Russia upon sale of treasury bonds. This

extraordinary transaction is an evidence of the serious character of the monetary stringency in England, aggravated by the unsatisfactory conditions apparent in almost every civilized country where English capital has heretofore found investment.

Among the unfavorable conditions existing in our own country, in addition to the undue expansion and resulting speculative investments which have been heretofore noted, should be mentioned the greatly reduced yield last year of wheat, oats, and corn, and the low prices which prevailed for the same. It is also to be observed that the importation of foreign commodities in 1890 exceeded in value that of any previous year. This was due, to some extent, to the passage of the new tariff act, which was made to take effect on the 6th of October, 1890. This undoubtedly greatly stimulated importations, in order that their arrival prior to the date mentioned might enable them to escape the higher rate of duty supposed to be imposed by the new act.

To relieve this severe monetary stringency the Secretary of the Treasury increased his purchase of United States bonds to such an extent as to almost entirely exhaust the available surplus in the Treasury. During the three and one-third months from July 19 to November 1, 1890, over \$99,000,000 were disbursed in payment for United States bonds and interest thereon. It is apparent, however, that while the relief afforded was timely and the sums disbursed very large, the unfavorable and threatening conditions were caused to a greater degree by want of confidence and a curtailment of credits than by lack of circulating medium. That this large disbursement had the effect of allaying excitement and promoting a return of confidence on the part of the general public is no doubt true.

As has been noted, the monetary stringency culminated on the 15th of November, 1890, and its effects within thirty days thereafter had to a considerable extent passed away, so far as could be observed in the larger cities. Its effect upon the country at large, however, still continued. Inability to place securities and to borrow money had arrested the operations of a great multitude of corporations scattered all over the country, and insolvency and failure had in a large number of cases ensued. Where failure did not take place new work was stopped, all credits were curtailed, and business in its different forms became greatly depressed. The growth of cities and villages was in many cases arrested, and the prices of city property, especially of a suburban character, became greatly reduced.

Corporations newly organized, with insufficient capital and inexperienced management, generally became insolvent, and speculative operations of every kind and character were prostrated. Liquidation took place in all branches of business, resulting in the failure and extinction of a large number of business enterprises which were never entitled to credit and in the curtailment of the operations of many possessing ample capital and skillful management.

The process of liquidation above referred to did not end with the monetary stringency in December, 1890, but has continued since that date, and its influences are still felt and its effects observed. The subject is here discussed because of its intimate connection with the bank failures of 1891.

CLEARING-HOUSE LOAN CERTIFICATES.

The effect of a general monetary stringency is felt first and most seriously by banks located in the larger of the reserve cities. *Whenever financial affairs are in a normal condition the surplus funds of the*

local banks find their way to the vaults of their correspondent banks located in the great centers of business activity. This is undoubtedly due in part to the fact that these deposits may be made available for lawful money reserve and that a small rate of interest is, as a rule, paid upon bank balances by associations in the larger cities, and to the further fact that the maintenance of a good balance with their city correspondents strengthens the claim of the interior banks upon the former for rediscounts when the temporary condition of redundancy passes away and the increased demand for money is greater than the interior banks from their resources can conveniently supply.

Thus it results that the wants of a continent in case of general depression are at last brought through various channels of business activity, by way of withdrawals or loans, to the bankers of the great metropolitan cities for relief, and they are presented in such a form, in many cases, as to preclude the possibility of refusal, if general bankruptcy is to be avoided.

During the period of the stringency above discussed the cities of New York, Philadelphia, and Boston were subjected to the most pressing demands, and after very careful consideration it was decided by the associated banks that the exigency made necessary a resort to the issuing of clearing-house loan certificates, for the purpose of settling clearing-house balances. This expedient had been successfully resorted to during the panics of 1873 and 1884.

At a meeting of the New York Clearing-House Association on the 11th day of November, 1890, the following resolution was unanimously adopted:

Resolved, That a committee of five be appointed by the chair, of which the chairman shall be one, to receive from banks members of the association bills receivable and other securities, to be approved by said committee, who shall be authorized to issue therefor, to such depositing banks, loan certificates bearing interest at 6 per cent per annum, and in addition thereto a commission of one-quarter of 1 cent for every thirty days such certificates shall remain unpaid, and such loan certificates shall not be in excess of 75 per cent of the market value of the securities of bills receivable so deposited, and such certificates shall be received and paid in settlement of balances at the clearing house.

Under this resolution a committee of five was appointed, and they proceeded, upon deposit of proper securities, to issue to applying banks loan certificates in the following form:

No. ———, \$20,000
Loan committee of the New York Clearing-House Association, New York, ———,
1890.

This certifies that the ——— has deposited with this committee securities in accordance with the proceedings of a meeting of the association held November 11, 1890, upon which this certificate is issued. This certificate will be received in payment of balances at the clearing house for the sum of twenty thousand dollars from any member of the Clearing-House Association.

On the surrender of this certificate by the depositing bank above named the committee will indorse the amount as a payment on the obligation of said bank held by them, and surrender a proportionate share of the collateral securities held therefor.

\$20,000.

Committee.

These certificates were, by unanimous agreement upon the part of the clearing-house banks, accepted in lieu of money in the settlement of clearing-house balances.

In order to provide for the retirement of these securities in case the collaterals pledged were found insufficient, the several boards of directors of the associated banks were requested to, and did, pass a resolution in the following form:

Resolved, That any loss resulting from the issue of loan certificates shall be borne by the banks comprising the Clearing-House Association pro rata of capital and surplus, and this resolution shall be ratified by the boards of the respective banks, members of the association, and a certified copy of such consent delivered to the chairman of the loan committee.

This committee, acting under the authority granted by the above resolution, issued to the associated banks loan certificates aggregating \$16,645,000. The first issue was made November 12, 1890, and the entire issue was retired on February 7, 1891. The largest amount outstanding at any one time was \$15,205,000, on the 13th of December, 1890.

On the 17th of November, 1890, similar proceedings were had by the Boston Clearing-House Association. On that day, at a meeting of the association, the following resolution was unanimously adopted:

Resolved, That a committee of five be appointed by the chair, of which committee the chairman shall also be a member, to receive from banks, members of the association, bills receivable and other securities, to be approved by said committee, who shall be authorized to issue therefor, to such depositing banks, loan certificates bearing interest at 7.3 per cent per annum, and such loan certificate shall not be in excess of 75 per cent of the market value of the securities or bills receivable so deposited, and such certificates shall be received and paid in settlement of balances at the clearing house.

It is observed also that the ultimate payment of the certificates, in case the pledged collaterals proved to be insufficient, was provided for through the ratification, by the boards of directors of the respective banks, of the following resolution passed by the Boston Clearing-House Association at the meeting above noted:

Resolved, That any loss arising from the issue of loan certificates shall be borne by the banks comprising the Clearing-House Association pro rata, according to the average daily amount which each bank shall have sent to the clearing house during the preceding year. It was also voted that this resolution shall be ratified by the boards of directors of the respective banks, members of the association, and a certified copy of such consent delivered to the chairman of the loan committee.

The form of the loan certificates issued under the resolution alluded to is as follows:

No. ——— \$5,000.

Loan committee of the Boston Clearing-House Association. Boston, ——— 189—.

This certifies that the ——— has deposited with this committee securities in accordance with the proceedings of a meeting of the association held November 17, 1890, upon which this certificate is issued.

This certificate will be received in payment of balances at the clearing house for the sum of five thousand dollars from any member of the Clearing-House Association.

On surrender of this certificate by the depositing bank above named, the committee will indorse the amount as a payment on the obligation of said bank held by them, and surrender a proportionate share of the collateral securities held therefor.

\$5,000.

Committee.

When a bank applied for and received loan certificates it was required to deposit the necessary securities and to also execute and deliver an obligation, of which the following is a copy:

The ——— Bank has this day received of, ———, loan committee of the Boston Clearing-House Association loan certificates issued by said committee in pursuance

of a vote of said association, passed November 17, 1890, to the amount of ——— thousand dollars, and has deposited with said committee the securities, a statement whereof is hereto annexed, and said ——— Bank receives said loan-certificates on the terms set forth in said vote, and agrees to pay the amount of said certificates, with interest thereon, as provided in said vote.

Under the operation of the resolution of authority granted by the clearing-house committee, as above noted, loan certificates were first issued on November 19, 1890, and the last were issued on December 6, 1890. On the latter date the issue reached its maximum of \$5,065,000. The last of the issue was retired on January 6, 1891.

The Clearing-House Association of Philadelphia took action on November 18, 1890, at which time, at a meeting of the Clearing-House Association, the following resolution was adopted:

Resolved, That, in accordance with resolution of September 24, 1873, as amended October 18, 1873, the clearing-house committee will issue loan certificates to banks applying and receive them in payment of balances.

The resolution of September 24, 1873, as amended October 18, 1873, reads as follows:

For the purpose of enabling the banks, members of the Philadelphia Clearing-House Association, to afford proper assistance to the mercantile and manufacturing community, and also to facilitate the inter-bank settlements resulting from their daily exchanges, we, the undersigned, do bind ourselves by the following agreement on the part of our respective banks, viz:

First. That the clearing-house committee be, and they are hereby, authorized to issue to any bank member of the association loan certificates bearing 6 per cent interest on the deposits of bills receivable and other securities to such an amount and to such percentage thereof as may in their judgment be advisable.

These certificates may be used in settlement of balances at the clearing house, and they shall be received by creditor banks in the same proportion as they bear to the aggregate amount of the debtor balances paid at the clearing house. The interest that may accrue upon these certificates shall be apportioned monthly among the banks which shall have held them during that time.

Second. The securities deposited with the said committee shall be held by them in trust as a special deposit, pledged for the redemption of the certificates issued thereupon, the same being accepted by the committee as collateral security, with the express condition that neither the Clearing-House Association, the clearing-house committee, nor any member thereof shall be responsible for any loss on said collaterals arising from failure to make demand and protest, or from any other neglect or omission, other than the refusal to take some reasonable step which the said depositing bank may have previously required in writing.

Third. On the surrender of such certificates, or any of them, by the depositing bank, the committee will indorse the amount as a payment on the obligation of said bank held by them, and will surrender a proportionate amount of securities, except in case of default of the bank in any of its transactions through the clearing house; in which case the securities will be applied by the committee, first, to the payment of outstanding certificates, with interest; next, to the liquidation of any indebtedness of such bank to the other banks, members of the Clearing-House Association.

Fourth. The committee shall be authorized to exchange any portion of said securities for others, to be approved by them, and shall have power to demand additional security, at their own discretion.

Fifth. That the clearing-house committee be authorized to carry into full effect this agreement, with power to establish such rules and regulations for the practical working thereof as they may deem necessary; and any loss caused by the non-payment of loan certificates shall be assessed by the committee upon all the banks in the ratio of capital.

Sixth. The expenses incurred in carrying out this agreement shall be assessed upon the banks in equal proportion to their respective capital.

Seventh. That the clearing-house committee be, and they are hereby, authorized to terminate this agreement upon giving thirty days' notice thereof at any stated meeting of the Clearing-House Association.

PHILADELPHIA, November 18, 1890.

At a meeting of the clearing-house committee, held this day, it was, on motion:

Resolved, That in accordance with resolutions of September 24, 1873, as amended October 18, 1873, the clearing-house committee will issue loan certificates to banks applying, and receive them in payment of balances.

The form of loan certificate issued by the Clearing-House Association of Philadelphia is here given:

No. _____ \$5,000.

Clearing-house committee of the Philadelphia banks, Philadelphia, _____, 1891.

This certifies that the _____ Bank has deposited with this committee, securities in accordance with the agreement of a meeting of bank officers held September 24, 1873. This certificate will be received during the continuance of said agreement and of any renewals of the same, in payment of balances at the clearing house, for the sum of five thousand dollars, only from a member of the Clearing-House Association to whom the same may have been issued, or to whom it may be indorsed by the manager of the clearing house.

On the surrender of this certificate by the depositing bank above named the committee will indorse the amount as a payment on the obligation of said bank held by them, and surrender a proportionate amount of the collateral securities except in case of default on the part of said bank in its transactions through the Clearing-House Association of Philadelphia.

Committee.

It will be observed that the original agreement under which the committee proceeded in this case was adopted during the panic of 1873 and after that subsided no further action was had under it until November, 1890, but the machinery was kept standing during the whole intervening period ready for immediate use whenever required.

The clearing-house committee having, by the agreement aforesaid, been authorized to issue loan certificates resolved, on November 5, 1890, to exercise this power, whereupon the banks desiring to take out loan certificates were required to adopt a resolution empowering the hypothecation of securities, under which the issue of loan certificates, signed by not less than three members of the committee, was commenced on November 19, 1890, and ceased on May 22, 1891, the total issue being \$9,655,000. The maximum issue, \$8,870,000, was reached on January 9. The certificates have all been retired excepting \$170,000 issued to the Keystone and Spring Garden National Banks.

DOMESTIC EXCHANGES.

In his annual report for 1890 the Comptroller published certain data in relation to domestic exchanges in the United States, which exhibited the amounts of drafts drawn during the year ended June 30, 1890, (1) upon national and other banks in the cities of New York, Chicago, and St. Louis, separately stated; (2) upon banks located in other reserve cities, and (3) upon all other banks.

Out of the 3,438 national banks in operation on the 30th day of June, 1890, 3,329 furnished the desired information. While the facts thus elicited attracted wide attention and proved valuable as illustrating the magnitude of the transactions liquidated through transfers of bank credits, it fell short of all that might be desired from the fact that drafts drawn upon reserve cities other than New York, Chicago, and St. Louis were not separately stated but were given in the aggregate only.

It was thought desirable to again call for this information for the purpose of instituting comparisons as between the operations of the two years, and also for the purpose of ascertaining the magnitude of the transactions with each of the reserve cities, to the end that similar calls following this at suitable intervals might afford the means of ascertaining the relative growth of the banking operations of the several reserve cities of the United States. For this purpose circular letters were addressed to each active bank in the system, and replies were received from 3,637, that being the number in operation on the 30th

day of June, 1891, exclusive of 22 associations that drew no exchange. This cheerful coöperation on the part of every bank in the system is worthy of special commendation, as last year 109 banks failed to make the necessary report.

In comparisons made between the operations of the year ended June 30, 1890, and the year ended June 30, 1891, it will be remembered that the former year covered the operations of 3,329 banks, and the latter year 3,637 banks. The total amount of drafts drawn by these 3,637 associations during the year ended June 30, 1891, was \$12,782,212,495. We find that of this amount there was drawn on New York \$7,836,208,250, on Chicago \$1,254,693,941, on St. Louis \$237,908,010, and on other reserve cities \$3,101,005,735, and on all other banks and bankers \$352,396,559.

Among the other reserve cities Boston leads with \$1,492,266,242, followed by Philadelphia with \$541,333,463.

From this statement it appears that of the total sum 61.31 per cent was drawn on banks in the city of New York; 9.82 per cent on Chicago; 1.86 per cent on St. Louis; 11.61 per cent on Boston, and 4.24 per cent on Philadelphia. The total sum drawn upon the reserve cities, excepting New York, Chicago, and St. Louis, was 24.25 per cent and 2.76 per cent on banks located elsewhere.

In order to exhibit these movements in detail the following table has been prepared:

TABLE SHOWING THE AMOUNT OF DRAFTS DRAWN BY NATIONAL BANKING ASSOCIATIONS UPON NEW YORK, CHICAGO, ST. LOUIS, THE OTHER RESERVE CITIES, AND ON ALL OTHER LOCATIONS, THE NUMBER OF BANKS DRAWING UPON EACH CITY AND THE PERCENTAGES OF DRAWINGS, IN 1891 AND 1890.

Location of banks drawn upon.	1891.			1890.		
	Number drawing.	Amount drawn.	Per cent.	Number drawing.	Amount drawn.	Per cent.
Central reserve cities:						
New York	3,826	\$7,836,208,250	61.31	3,147	\$7,284,982,694	63.07
Chicago	1,146	1,254,693,941	9.82	1,024	1,084,574,568	9.39
St. Louis	589	237,908,010	1.86	481	188,765,842	1.64
Other reserve cities:						
Boston	853	1,492,266,242	11.61			
Albany	68	26,947,718	.21			
Philadelphia	664	541,333,463	4.24			
Pittsburg	204	147,213,869	1.15			
Baltimore	258	87,802,114	.69			
Washington	67	4,651,146	.04			
New Orleans	243	37,518,587	.30			
Louisville	200	56,056,805	.44			
Cincinnati	429	148,726,218	1.17			
Cleveland	128	29,473,237	.24	2,334	*2,527,757,482	*21.88
Detroit	105	55,510,913	.44			
Milwaukee	111	36,069,676	.29			
Kansas City	391	104,363,214	.82			
St. Joseph	57	10,556,220	.08			
Omaha	228	104,362,120	.82			
Brooklyn	6	1,771,976	.01			
St. Paul	170	75,937,658	.60			
Minneapolis	98	29,784,617	.24			
San Francisco	231	108,329,796	.85			
Des Moines	22	2,291,146	.01			
All other localities	1,325	352,396,559	2.76	1,080	464,817,739	4.02
Total		12,782,212,495	100.00		11,550,898,255	100.00

*The total amount of drafts drawn upon other reserve cities (not shown in detail in 1890) is \$3,101,005,735 and the percentage 24.25.

In order to facilitate a comparison between the operations of the year ended June 30, 1890, and those of the year ended June 30, 1891, the totals and percentages for the former year are included in the table.

It will be observed that in the total amount of drafts drawn there has

been an increase in each of the three central reserve cities and in the amounts drawn upon all other reserve cities, but that the total of drafts drawn upon all other banks has fallen off to a marked degree.

It will be noticed that the grand aggregate for all banks shows an increase of \$1,231,314,240, being slightly in excess of 11 per cent. So far as the percentages show the relative importance of the several reserve cities the changes do not appear important. New York City, relatively, has slightly fallen off while Chicago and St. Louis each show a slight increase in percentages. Other reserve cities have increased from 21.88 to 24.25 per cent, indicating the growing importance of the business tributary to the inland cities.

In the following table is exhibited the amounts of exchange drawn by all the national banks, classified by States and arranged in the order of the total amounts drawn, further subdivided so as to show the operations of the banks in reserve cities and other banks separately during the year ended June 30, 1891, to which has been added a column giving corresponding totals for the previous year.

AMOUNT OF DRAFTS DRAWN BY ALL REPORTING BANKS IN 1891 AND 1890.

Location of drawing banks.	Reserve cities.		All other.		Total.		
	No. of banks.	Amount.	No. of banks.	Amount.	No. of banks.	Amount.	Amount.
		1891.		1891.	1891.	1891.	1890.
Massachusetts.....	56	\$329,641,060	207	\$818,017,643	263	\$1,647,658,703	\$1,690,009,684
Illinois.....	30	1,018,432,079	181	391,917,187	201	1,410,349,266	1,361,844,062
Pennsylvania.....	69	639,841,131	297	637,423,002	366	1,277,264,133	1,130,402,494
New York.....	43	225,601,726	265	741,980,287	308	967,581,993	919,745,894
Ohio.....	23	530,097,176	212	314,374,121	235	833,471,368	772,099,023
Missouri.....	24	573,632,074	58	62,225,868	82	635,857,962	543,777,164
New Jersey.....			95	540,605,942	95	540,605,942	508,700,947
Connecticut.....			84	428,790,755	84	428,790,755	416,047,524
Nebraska.....	9	213,748,926	128	107,410,740	137	381,159,666	331,177,493
Michigan.....	8	135,999,011	100	223,687,990	108	369,686,997	345,484,681
Texas.....			209	347,699,375	209	347,699,375	241,780,749
Minnesota.....	11	230,330,479	49	92,531,690	60	322,862,169	281,262,306
Rhode Island.....			59	328,295,972	59	328,295,972	323,357,109
Low.....	4	83,892,532	142	281,542,619	146	315,345,151	229,878,098
Maryland.....	22	253,512,103	41	43,454,874	63	296,966,976	260,619,135
Indiana.....			100	221,086,925	100	221,086,925	186,618,301
Wisconsin.....	3	64,779,622	67	123,070,870	70	187,850,498	149,171,877
Colorado.....			50	176,871,574	50	176,871,574	160,755,610
Maine.....			78	176,479,284	78	176,479,284	162,579,412
Kansas.....			145	159,419,841	145	159,419,841	143,467,707
Tennessee.....			54	152,719,395	54	152,719,395	94,831,961
New Hampshire.....			52	141,525,565	52	141,525,565	134,854,170
Kentucky.....	10	60,847,654	69	77,307,129	79	138,148,783	133,081,928
Louisiana.....	10	119,636,353	11	15,282,086	21	134,919,339	120,422,635
California.....	2	28,131,600	34	96,342,605	36	124,474,205	110,748,694
Virginia.....			35	118,601,654	35	118,601,654	83,719,222
Vermont.....			50	103,244,799	50	103,244,799	85,033,920
Washington.....			63	94,194,990	63	94,194,990	74,334,294
Georgia.....			32	88,208,733	32	88,208,733	88,055,102
Oregon.....			40	70,335,904	40	70,335,904	58,548,436
Montana.....			29	65,765,034	29	65,765,034	52,223,703
Alabama.....			31	65,046,139	31	65,046,139	53,335,607
District of Columbia.....	12	48,251,748	1	4,111,808	13	52,363,656	40,206,305
North Carolina.....			21	47,131,898	21	47,131,898	45,572,126
Florida.....			18	43,546,212	18	43,546,212	35,125,031
South Carolina.....			15	42,705,672	15	42,705,672	41,378,067
Delaware.....			18	40,761,234	18	40,761,234	30,949,385
West Virginia.....			23	34,414,274	23	34,414,274	25,187,612
South Dakota.....			39	33,215,067	30	33,215,067	32,061,974
Mississippi.....			13	29,079,559	13	29,079,559	22,948,968
Arkansas.....			10	27,905,777	10	27,905,777	31,359,123
North Dakota.....			33	26,574,478	33	26,574,478	16,553,426
Utah.....			13	26,227,052	13	26,227,052	27,349,987
New Mexico.....			12	20,142,533	12	20,142,533	14,837,575
Wyoming.....			11	11,891,088	11	11,891,088	10,413,895
Idaho.....			7	10,735,634	7	10,735,634	8,507,703
Arizona.....			3	3,494,472	3	3,494,472	1,294,390
Nevada.....			2	2,267,907	2	2,267,907	2,665,871
Indian Territory.....			2	2,090,873	2	2,090,873	.....
Oklahoma.....			3	1,890,833	3	1,890,833	.....
Total.....	366	5,002,382,276	3,311	7,779,930,223	3,637	12,782,312,499	11,559,899,255

It will be noticed that some changes have taken place in the relative importance of the several States during the year. Those whose relative increase is most conspicuous are Texas, Tennessee, Washington, Wisconsin, Nebraska, and Iowa.

In order to further illustrate the operations of banks covered by the foregoing statement the following table is introduced, which exhibits the amount drawn by banks in the several reserve cities:

AMOUNT OF DRAFTS DRAWN BY BANKS IN THE SEVERAL RESERVE CITIES, 1891.

Reserve cities.	On New York.	On Chicago.	On St. Louis.	On other reserve cities.	On all other banks.	Total.
New York	\$11,427,570	\$82,822	\$10,636	\$80,541,409	\$325,172	\$92,387,609
Chicago	664,512,872	222,499,996	4,800,751	111,755,435	14,863,026	1,018,432,079
Boston	709,240,027	2,303,527	7,021	117,541,446	549,039	829,641,060
Philadelphia	869,221,119	658,366	10,531	37,016,939	5,744,251	1,421,651,206
Kansas City	161,740,162	72,527,858	66,358,648	7,078,086	.....	307,704,754
Cleveland	264,310,389	11,048,040	848,059	15,276,312	858,507	292,341,367
Baltimore	217,596,049	68,334	7,500	35,558,171	282,048	253,512,102
Cincinnati	178,724,488	12,895,728	5,060,596	28,822,015	2,244,042	227,755,869
Pittsburg	106,180,779	10,297,358	47,574	50,511,300	153,014	227,189,925
St. Louis	180,191,109	24,122,397	.....	13,004,896	317,836	217,636,298
Omaha	119,157,265	74,832,966	10,008,713	9,599,982	100,000	213,748,926
Detroit	113,096,537	12,368,454	97,590	9,652,989	784,431	135,990,011
Albany	128,463,210	50,748	.....	3,582,159	.....	132,096,117
St. Paul	73,450,444	32,680,687	1,357,841	17,818,378	.....	125,307,350
New Orleans	115,324,617	1,876,125	649,674	1,678,106	107,831	119,636,353
Minneapolis	52,586,949	33,077,458	.....	23,710,841	1,850,861	111,026,139
Milwaukee	30,142,935	32,930,400	13,100	1,693,187	.....	64,779,622
Louisville	51,870,569	2,245,226	1,161,693	4,791,938	772,176	60,841,654
St. Joseph	29,257,426	6,878,186	5,552,705	6,602,705	.....	48,281,022
Washington	43,894,887	101,411	.....	4,268,950	16,500	48,251,748
Des Moines	12,546,821	20,150,723	590,224	505,765	.....	33,893,532
San Francisco	23,076,239	2,241,068	.....	2,711,961	101,732	28,131,000
Brooklyn	784,000	.....	.....	334,000	.....	1,118,000
Total	3,716,566,553	575,907,476	96,591,768	584,055,960	29,070,486	5,002,282,273

The same classification applying to all banks located outside of reserve cities is exhibited by the table which is here introduced:

AMOUNT OF DRAFTS DRAWN BY BANKS IN THE SEVERAL STATES OUTSIDE OF THE RESERVE CITIES.

States and Territories.	On New York.	On Chicago.	On St. Louis.	On other reserve cities.	On all other banks.	Total.
Massachusetts	\$108,959,035	\$1,270,456	.....	\$617,212,324	\$574,928	\$818,017,541
New York	604,127,300	227,051	.....	45,139,508	2,488,778	741,983,237
Pennsylvania	248,749,410	892,017	.....	387,047,063	733,512	637,422,802
New Jersey	474,546,790	.....	.....	66,059,152	.....	540,605,942
Connecticut	384,480,563	575,034	.....	43,735,133	2,025	428,790,733
Illinois	129,880,585	211,483,127	\$20,634,405	18,054,459	4,084,611	391,917,187
Texas	185,838,827	3,352,581	35,890,689	22,200,479	102,407,799	347,669,875
Rhode Island	172,546,722	5,000	.....	128,800,624	24,354,026	426,286,972
Ohio	212,485,209	4,163,312	138,615	87,062,772	9,524,234	513,374,192
Iowa	91,173,100	166,686,446	3,400,035	65,801,353	1,973,180	381,542,619
Michigan	107,190,111	58,728,342	.....	65,801,353	1,973,180	253,687,956
Indiana	124,182,211	36,088,161	1,755,631	48,506,990	10,552,992	221,086,925
Colorado	110,573,232	13,749,633	8,090,521	20,360,462	24,097,765	176,871,574
Maine	30,775,488	.....	.....	140,401,371	5,302,424	176,479,284
Nebraska	51,497,219	25,558,040	521,698	83,009,991	6,825,822	167,410,746
Kansas	72,686,155	11,020,635	12,518,337	58,404,566	4,189,618	159,419,341
Tennessee	113,734,001	2,020,824	4,679,853	23,385,804	8,898,913	152,719,395
New Hampshire	6,121,196	.....	.....	135,326,748	78,021	141,525,965
Wisconsin	27,877,662	65,192,471	334,308	28,656,767	1,046,578	122,070,876
Virginia	76,194,129	.....	.....	37,932,121	3,934,404	118,061,654
Vermont	39,216,092	.....	.....	63,896,807	221,000	103,244,799
California	22,768,345	4,860,245	800,014	60,330,784	8,063,277	96,942,665
Washington	88,080,274	6,648,132	145,242	22,293,636	27,027,713	144,194,066
Minnesota	29,847,628	25,617,592	214,000	36,203,506	748,957	92,532,680
Georgia	81,383,549	.....	.....	6,326	3,792,882	88,268,732
Kentucky	25,511,604	111,706	724,780	46,627,378	4,321,661	77,597,129

AMOUNT OF DRAFTS DRAWN BY BANKS IN THE SEVERAL STATES OUTSIDE OF THE RESERVE CITIES—Continued.

States and Territories.	On New York.	On Chicago.	On St. Louis.	On other reserve cities.	On all other banks.	Total.
Oregon.....	\$26,433,159	\$3,839,667	\$297,649	\$27,810,020	\$12,455,409	\$70,835,904
Montana.....	27,364,581	8,474,225	1,057,564	10,825,212	8,043,452	65,765,034
Alabama.....	54,908,981	208,808	511,999	5,709,345	3,706,916	65,046,139
Missouri.....	11,885,608	6,947,099	30,557,091	11,993,594	851,866	62,223,888
North Carolina.....	33,280,702			8,511,339	5,309,857	47,131,898
Florida.....	33,121,246	221,362	9,983	2,768,814	7,424,597	43,546,212
Maryland.....	8,585,281			34,645,591	224,092	43,454,874
South Carolina.....	39,789,408			1,447,152	1,472,112	42,708,672
Delaware.....	6,834,238			22,920,990		40,761,234
West Virginia.....	14,656,484	1,100		16,678,515	3,078,175	34,414,274
South Dakota.....	12,805,802	12,606,022		3,912,772	3,835,871	33,215,067
Mississippi.....	12,408,923	9,259	1,056,211	7,524,924	2,082,242	29,079,559
Arkansas.....	11,448,297	1,312,519	10,763,178	1,960,040	2,415,143	27,905,777
North Dakota.....	9,548,217	1,875,638		14,735,170	915,453	26,574,478
Utah.....	13,407,576	1,963,596	812,160	6,970,371	1,572,840	26,227,052
New Mexico.....	11,725,848	799,366	1,012,364	5,039,856	1,568,099	20,142,533
Louisiana.....	6,982,710	1,653	1,372,557	6,255,493	630,654	15,262,986
Wyoming.....	4,663,387	1,634,542		4,659,855	932,584	11,891,088
Idaho.....	4,680,711	832,127		2,875,040	2,347,806	10,735,684
District of Columbia.....	3,774,672			327,063	10,173	4,111,908
Arizona.....	1,103,444	70,932	74,360	1,563,316	682,420	3,494,472
Nevada.....	394,750	81,813		1,474,928	376,416	2,237,907
Indian Territory.....	1,166,646		367,691	422,534	134,162	2,090,873
Oklahoma.....	395,170	60,203	68,391	978,994	228,075	1,800,833
Total.....	4,119,641,697	678,696,465	141,316,242	2,516,948,745	323,326,073	7,770,930,222
By banks in reserve cities.....	3,716,568,553	675,997,476	96,591,768	584,055,990	29,070,486	5,002,282,273
Grand total.....	7,836,208,250	1,254,693,941	237,908,010	3,101,005,735	352,396,559	12,782,212,495

In order to show the magnitude and direction of the movements in each geographical division the following tables are introduced:

STATEMENT SHOWING THE AMOUNT OF DRAFTS DRAWN, BY NATIONAL BANKING ASSOCIATIONS IN EACH GEOGRAPHICAL DIVISION, UPON NEW YORK, CHICAGO, ST. LOUIS, THE OTHER RESERVE CITIES, AND ALL OTHER CITIES, DURING THE YEAR ENDING JUNE 30, 1891.

Location of banks drawn on.	New England States.	Middle States.	Southern States.	Western States.	Pacific States and Territories.	Total.
New York.....	\$1,541,340,924	\$2,374,155,305	\$862,389,077	\$2,760,558,972	\$297,763,972	\$7,836,208,250
Chicago.....	4,152,017	12,378,707	11,361,252	1,182,048,316	44,753,649	1,254,693,941
St. Louis.....	7,021	76,241	54,826,945	170,771,947	12,225,850	237,908,010
Boston.....	1,235,778,891	121,094,863	5,289,261	125,161,030	4,942,197	1,492,266,242
Albany.....	927,762	25,672,950		347,000		26,947,718
Philadelphia.....	7,483,618	457,073,655	24,571,567	51,766,700	458,123	541,333,463
Pittsburg.....	50,549	131,091,708	2,553,021	13,518,591		147,213,809
Baltimore.....	1,741,981	37,908,109	35,842,598	12,309,426		87,802,114
Washington.....	500	1,643,163	2,658,221	349,262		4,651,146
New Orleans.....		64,108	34,358,496	3,095,983		37,518,587
Louisville.....		286,651	29,009,163	26,760,991		50,056,805
Cincinnati.....	21,721	1,814,437	47,221,497	99,651,506	17,057	148,726,218
Cleveland.....		1,740,469		27,732,437	331	29,473,237
Detroit.....		16,470	235,000	55,298,443		55,549,913
Milwaukee.....		31,797		36,033,702	4,177	36,066,076
Kansas City.....	54,972	2,421	8,187,321	78,743,906	18,090,553	105,078,273
St. Joseph.....				9,687,763	153,398	9,841,161
Omaha.....		1,320		81,692,484	22,668,816	104,362,120
Brooklyn.....	456,630	349,000	111,619	381,714	472,963	1,771,976
St. Paul.....		12,702		61,223,121	14,701,835	75,937,658
Minneapolis.....	612	2,230		28,855,551	926,224	29,784,017
San Francisco.....	816,867	152,652	546,270	1,912,272	105,401,735	108,329,796
San Marcos.....				2,291,146		2,291,146
All other cities.....	31,662,063	9,977,540	150,365,502	72,689,625	87,701,829	352,396,559
Total.....	2,823,995,978	3,175,546,504	1,269,526,810	4,902,881,888	610,262,215	12,782,212,495

STATEMENT SHOWING BY GEOGRAPHICAL DIVISIONS THE AMOUNT OF DRAFTS DRAWN BY NATIONAL BANKING ASSOCIATIONS ON BANKS IN NEW YORK, CHICAGO, ST. LOUIS, THE OTHER RESERVE CITIES, AND ON BANKS ELSEWHERE, DURING THE YEAR ENDED JUNE 30, 1891.

Location.	On New York.	On Chicago.	On St. Louis.	On other reserve cities.	On all other localities.	Total.
New England States:						
Massachusetts.....	\$198,959,935	\$1,270,456	.....	\$617,212,324	\$574,928	\$818,017,643
Boston.....	709,240,027	2,303,527	\$7,021	117,541,446	549,039	829,641,090
Connecticut.....	384,480,563	573,034	.....	43,735,133	2,025	428,790,755
Rhode Island.....	172,546,722	5,000	.....	128,809,624	24,934,626	329,295,972
Maine.....	39,775,489	.....	.....	140,401,371	5,302,424	176,479,284
New Hampshire.....	6,121,190	.....	.....	135,326,348	78,021	141,525,565
Vermont.....	29,216,992	.....	.....	63,806,807	221,000	103,244,799
Total.....	1,541,340,924	4,152,017	7,021	1,246,833,053	31,662,063	2,823,995,078
Middle States:						
New York.....	694,127,300	227,651	.....	45,139,508	2,488,778	741,983,237
New York City.....	11,427,570	82,822	10,636	80,541,400	325,172	92,887,609
Albany.....	128,463,210	50,748	.....	3,582,159	.....	132,096,117
Brooklyn.....	784,000	.....	.....	334,000	.....	1,118,000
Pennsylvania.....	248,749,410	892,017	.....	387,047,603	735,512	637,422,602
Philadelphia.....	269,221,119	658,366	10,531	37,010,939	5,744,251	412,651,206
Pittsburg.....	166,180,779	10,297,358	47,574	50,511,200	153,014	227,189,925
New Jersey.....	474,549,790	.....	.....	66,059,152	.....	540,605,942
Maryland.....	8,585,281	.....	.....	34,645,501	234,602	43,454,874
Baltimore.....	217,596,049	68,334	7,500	35,558,171	282,048	253,512,102
District of Columbia.....	3,774,672	.....	.....	327,063	10,173	4,111,908
Washington.....	43,864,887	101,411	.....	4,268,950	16,500	48,251,748
Delaware.....	6,834,238	.....	.....	33,926,996	.....	40,761,234
Total.....	2,374,155,305	12,378,707	76,241	778,958,711	9,977,540	3,175,546,504
Southern States:						
Texas.....	185,838,827	3,352,581	33,890,699	22,209,479	102,407,799	247,699,375
Tennessee.....	113,734,001	2,020,824	4,079,853	23,385,894	8,898,913	152,719,395
Kentucky.....	25,511,604	111,706	724,780	46,027,378	4,331,661	77,307,129
Louisville.....	51,870,599	2,245,226	1,161,695	4,791,958	772,176	60,841,654
Louisiana.....	6,982,710	1,652	1,372,557	0,205,403	699,664	15,282,886
New Orleans.....	115,324,617	1,876,125	649,674	1,678,100	107,831	119,636,353
Virginia.....	76,134,129	.....	.....	37,933,121	3,934,401	118,001,654
Georgia.....	81,383,549	.....	6,326	3,026,056	3,792,802	88,208,733
Alabama.....	54,908,981	208,898	511,999	5,709,345	3,706,916	65,046,139
North Carolina.....	33,280,702	.....	.....	8,541,339	5,309,857	47,131,898
Florida.....	33,121,246	221,362	9,983	2,768,814	7,424,807	43,546,212
South Carolina.....	39,780,408	.....	.....	1,447,152	1,472,112	42,705,672
West Virginia.....	14,650,484	1,100	.....	10,078,513	3,078,175	34,414,274
Mississippi.....	18,406,923	9,259	1,056,211	7,524,924	2,082,242	29,079,559
Arkansas.....	11,448,297	1,312,519	10,763,178	1,966,640	2,415,143	27,905,777
Total.....	862,589,077	11,361,252	54,826,945	190,584,034	150,365,502	1,269,526,810
Western States:						
Illinois.....	129,890,585	211,483,127	26,634,405	18,954,450	4,984,611	391,917,187
Chicago.....	664,512,872	222,499,995	4,800,751	111,755,435	14,868,026	1,018,432,079
Ohio.....	212,485,209	4,163,312	138,615	87,062,772	9,524,284	313,774,192
Cleveland.....	264,310,389	11,048,040	848,059	15,276,312	855,507	292,341,307
Cincinnati.....	178,724,488	12,895,728	5,069,590	28,822,015	2,244,042	227,755,909
Missouri.....	11,885,608	6,947,099	30,557,091	11,983,594	851,896	62,225,888
Kansas City.....	161,740,162	72,527,858	66,358,648	7,078,086	.....	307,704,754
St. Louis.....	180,191,160	24,122,397	.....	13,004,896	317,536	217,636,298
St. Joseph.....	29,257,426	6,878,186	5,532,705	6,602,705	.....	48,291,622
Nebraska.....	51,497,219	25,558,040	521,098	83,009,961	6,823,822	167,410,740
Omaha.....	119,157,265	74,882,966	10,008,713	9,599,982	100,000	213,748,926
Michigan.....	107,190,111	58,723,342	.....	65,801,353	1,073,180	233,687,985
Detroit.....	113,096,537	12,368,454	97,500	9,652,038	784,431	135,999,011
Minnesota.....	29,847,636	25,517,592	214,000	36,203,505	748,957	92,531,690
St. Paul.....	73,450,444	32,680,687	1,357,841	17,818,378	.....	125,307,350
Minneapolis.....	52,380,949	33,077,458	.....	23,710,841	1,850,881	111,026,129
Iowa.....	91,175,100	166,686,446	3,400,035	14,058,398	6,222,640	281,542,619
Des Moines.....	12,546,821	20,159,722	590,224	505,765	.....	33,802,536
Indiana.....	124,182,211	36,088,101	1,755,631	48,506,990	10,553,992	221,086,922
Wisconsin.....	27,877,662	65,152,471	334,398	28,659,767	1,046,578	123,070,875
Milwaukee.....	30,142,935	32,930,400	13,100	1,693,187	.....	64,779,622
Kansas.....	72,680,155	11,620,635	12,518,337	58,404,596	4,189,618	159,419,341
South Dakota.....	12,805,802	12,660,622	.....	3,912,772	3,835,871	33,215,907
North Dakota.....	9,548,217	1,375,638	.....	14,735,179	915,453	26,574,478
Total.....	2,760,558,972	1,182,048,316	170,771,947	710,813,028	72,089,025	4,902,881,888

STATEMENT SHOWING BY GEOGRAPHICAL DIVISIONS THE AMOUNT OF DRAFTS DRAWN BY NATIONAL BANKING ASSOCIATIONS, ETC.—Continued.

Location.	On New York.	On Chicago.	On St. Louis.	On other reserve cities.	On all other localities.	Total.
Pacific States and Territories:						
Colorado.....	\$110,573,233	\$13,742,633	\$8,090,521	\$20,360,402	\$24,097,785	\$176,871,574
California.....	22,788,345	4,360,245	800,013	60,330,784	8,063,277	96,342,665
San Francisco ..	23,076,239	2,241,668	.....	2,711,981	101,732	28,131,600
Washington.....	38,080,273	6,648,132	145,242	22,293,636	27,027,713	94,194,996
Oregon.....	26,433,159	3,830,667	297,649	27,310,020	12,455,409	70,335,904
Montana.....	37,364,581	8,474,225	1,057,564	10,825,212	8,043,452	65,765,034
Utah.....	15,407,576	1,903,996	312,160	6,970,371	1,572,949	26,227,052
New Mexico.....	11,725,848	706,366	1,012,364	5,039,856	1,568,099	20,142,533
Wyoming.....	4,663,997	1,634,642	.....	4,659,855	932,504	11,891,088
Idaho.....	4,080,711	832,127	.....	2,875,040	2,347,806	10,735,684
Arizona.....	1,103,444	70,932	74,360	1,563,316	682,420	3,494,472
Nevada.....	304,759	81,813	.....	1,474,928	376,416	2,237,907
Indian Territory....	1,166,646	.....	367,591	422,534	134,102	2,060,873
Oklahoma.....	295,170	60,203	68,391	978,994	298,075	1,800,833
Total.....	297,763,972	44,753,649	12,225,856	167,816,909	87,701,829	610,262,215
Total all divisions.	7,836,208,250	1,254,693,941	237,908,010	3,101,005,735	352,396,559	12,782,212,495

Tables are given in the Appendix,* pp. 220, showing (1) the amounts of drafts drawn by national banking associations located in the reserve cities, upon all banks in each reserve city; (2) similar information in respect to banks outside of reserve cities; and (3) a tabular statement showing by geographical divisions the amount drawn by national banking associations in each State, reserve city, and geographical division, upon each reserve city.

Notwithstanding that the total amount of drafts drawn by the national banks of the United States during the year ended June 30, 1891, shows a satisfactory increase over the operations of the year immediately preceding that under consideration, it should be remembered that the year ended June 30, 1891, has been one of great depression on account of the monetary stringency which prevailed for the greater part of that period, and the consequent liquidations which have been in progress. While by far the larger part of the banking business is conducted through associations belonging to the national system, it is necessary to take into consideration the operations of banks other than national in order to arrive at a proper estimate of the magnitude of the business liquidated through the agency of the banking institutions of the country.

In the collection of statistics required by the statute the Comptroller has this year received reports from 4,342 corporations or firms other than national banks which do a commercial banking business, in whole or in part. Of these 2,572 are State banks, 171 loan and trust companies, 364 are savings banks having capital stock, and 1,235 are private bankers. These represent a capital of \$356,749,315. If the domestic exchange drawn by these banking institutions bears the same relation to their capital stock as in the case of national banks, it will be found that the amount of drafts drawn by banks and bankers other than national will amount to \$6,743,157,040.

In order to arrive at the grand total of domestic exchange drawn by all the banks and bankers of the United States the following statement has been prepared, exhibiting the amounts of drafts drawn by—

3,637 national banks, official.....	\$12,782,212,495
4,342 State banks, private banks, etc.....	6,743,157,040
Total.....	19,525,369,535

* This appendix, which is omitted for want of space, will be found in the separate volumes of the Comptroller's report.

As there are many banks other than national that do not report to the Comptroller of the Currency, with regard to which no statistics are accessible, it is probable that the amount estimated as drawn by these institutions in the above table is understated.

The magnitude of the operations thus indicated illustrates how indispensable banks are to the safe and economical conduct of the business of the country. This immense total of nearly \$20,000,000,000 represents simply the net balances between various localities adjusted through the agency of banks, and bears a very small proportion to the gross transactions which are taking place between the banks and their customers. Some idea can be formed of the magnitude of the total transactions of national banks by consideration of the fact that on the first day of July, 1890, the receipts by 3,364 national banks of the United States aggregated \$421,824,726. If we take \$421,000,000 as the average daily transactions of the national banks, and multiply this by 307 as the number of business days in the year, it will be found that the total receipts of these banks for a single year would amount to \$129,247,000,000, or a sum greatly in excess of the estimated value of all the real and personal property of Great Britain and the United States combined.

When we come to realize with what economy and safety this immense business is transacted the importance of perpetuating and perfecting the national banking system can not fail to command attention.

In another part of this report will be found a statement of the average annual losses by reason of the failure of national banks. When this comparatively small loss is placed against the immense transactions which have taken place through these agencies the conspicuous fidelity of the associations constituting the system must be recognized by every impartial observer.

EXAMINATIONS.

The national bank act was perfected with great care, and in its provisions were embodied all those salutary restraints which previous legislation and the banking experience of the world for many centuries had demonstrated to be conducive to the safe and successful conduct of banks organized for commercial business. The wisdom of those who were responsible for its preparation has been vindicated by the unexampled success which has attended banks organized under it during the past twenty-nine years. No system has ever issued notes circulating at par over so wide an area of country, absolutely without loss to holders; nor has any other afforded such complete security to depositors and creditors.

The administration of this act was committed to a Bureau of which the Comptroller of the Currency is the chief officer, and all the provisions incident to the organization, supervision, and closing of associations are designed to be executed through the operation of the agency so created. The duties of the Comptroller of the Currency, as the chief executive officer, are set forth with great clearness and particularity. So far as the proceedings incident to the organization of new associations are concerned, up to and including the certificate authorizing them to begin business, they are so conducted as to make it possible for the Comptroller to personally supervise the details and see that the law is obeyed.

It is impossible, however, for him to personally visit the various associations after organization is completed and ascertain for himself that

the conduct of their affairs is in every particular in conformity with law. His information in relation to matters incident to the internal management of a bank reaches him through two channels. First, through what are known as "reports of condition," which are required to be made by each association, upon call of the Comptroller, for some past date, at least five times a year, and, secondly, through reports made by national-bank examiners. Reports of condition are made upon the oath or affirmation of the president or cashier, attested by at least three directors, and are required to be published in some newspaper issued in the locality where the bank is situated.

The report prepared in these cases is substantially a trial balance from the general ledger, under such classifications as the Comptroller directs, showing in detail the entire resources of the association upon the one hand, and its entire liabilities upon the other. If correctly and honestly made, these published reports afford to the shareholders and creditors of the association an opportunity to form a reasonably correct judgment as to its solvency, its earnings, and the value of its shares. Certain schedules accompany these reports, which are designed to disclose such facts as will indicate whether or not any provision of the national-bank act has been violated. This system of reports, especially so far as it applies to banks under honest management, is no doubt to a certain degree effective in preventing unwise and unlawful acts on the part of those directly charged with the management.

As severe penalties are imposed upon any officer or employé who makes or aids or abets others in making any false report or statement of the association with intent to defraud or deceive, even those whose honesty may be brought in question are constrained through fear to make truthful reports. It sometimes occurs, however, that banks fall under the management of those who are utterly wanting in integrity and are undeterred by the penalties of the law. Occasionally the active officers of the bank enter into such collusion as renders it comparatively safe, in their opinion, to make reports which are designed to cover up unlawful practices, and to either overstate the value of the bank's resources, or understate its liabilities, so that the published report thus made serves to grossly deceive those for whose benefit the publication has been wisely ordered.

As banks under honest management are usually conducted in obedience to law, it is clear that the value of governmental supervision is determined by the success it may achieve in ascertaining facts hidden from view by bank managers whose purpose it is to keep from the knowledge of the Comptroller conditions which might involve impairment of capital, insolvency, or criminality. The agency provided by law for ascertaining with greater certainty the condition of these associations is through the periodical visits of examiners appointed for the purpose.

The authority for the appointment of national-bank examiners is found in section 5240 of the Revised Statutes of the United States, wherein it is provided that—

The Comptroller, with the approval of the Secretary of the Treasury, shall, as often as shall be deemed necessary or proper, appoint a suitable person or persons to make an examination of the affairs of every banking association, who shall have power to make a thorough examination into all the affairs of the association, and, in doing so, to examine any of the officers and agents thereof on oath; and shall make a full and detailed report of the condition of the association to the Comptroller.

This brief paragraph contains the only provision of law for the appointment of national-bank examiners, and is the only place where

his rights, powers, and duties are set forth. It is apparent that these examiners were to be the confidential agents of the Comptroller, and as such to have such duties and to exercise such powers, within the law, as the Comptroller might from time to time direct.

As has been said, these examiners have always been regarded as the confidential agents of the Comptroller, and the various communications and reports transmitted by them to him have always been considered as confidential and privileged.

The relations existing between the Comptroller and his examiners is of such a character that they must necessarily possess his entire confidence. Any information which might lead him to entertain a reasonable doubt as to the skill or integrity of an examiner would make it his duty to immediately suspend him, even though the information might be of such a character as could not be substantiated by competent proof, or of such a confidential nature as would make it necessary for the Comptroller to withhold the character of the charges from the examiner himself. The Comptroller would be derelict in duty who would continue to employ the services of an examiner who had so conducted himself as to impair that complete confidence which must from the necessities of the case exist on the part of his superior officer.

Inasmuch as the original purpose of those who framed the national-bank act was to make a market for the securities of the United States, to provide notes for circulation, and to create fiscal agencies for the service of the Government, it is fair to presume that they had in view such an examination as would enable the Comptroller to ascertain whether or not the various provisions of law had been complied with, and to see that the interests of the Government were protected, so far as they were involved in deposits of public moneys or the issuing of circulating notes.

Among other requirements the national-bank act provides that the capital stock of an association shall be fully paid in cash, and that each director shall be a citizen of the United States and the bona fide owner of at least ten shares of the capital stock; that loans shall be made only on personal security; that real estate, when lawfully held, shall be disposed of within the period of five years; that a list of shareholders shall be correctly prepared and kept subject to the inspection of creditors and shareholders; that a reserve of lawful money shall be held against deposits; that dividends shall not be made until earned; that loans to any one person, corporation, or firm shall not exceed in amount 10 per cent of the capital paid in; that the liabilities of the association under section 5202 of the Revised Statutes of the United States shall not exceed the amount of its capital stock actually paid in; that checks shall not be certified in excess of the drawer's deposit, and that loans shall not be made while the lawful money reserve is deficient.

It would seem to be the duty of an examiner in making an official visit to an association to ascertain whether or not these requirements had been fully complied with and to report any disobedience of these provisions of law brought to his attention. He is also expected upon occasion to ascertain and report to the Comptroller as to whether or not the latter can properly approve a proposed increase or reduction of capital, and as to the propriety of permitting an association desiring to do so to extend its corporate existence or go into voluntary liquidation.

Inasmuch as the Comptroller is authorized to require any association whose capital becomes impaired to pay the deficiency by assessment upon its shareholders and to appoint a receiver to close up its business in case it fails to make good its capital within three months after being

notified so to do, and inasmuch as the Comptroller is further authorized to appoint a receiver for any association which he shall become satisfied is insolvent, it would appear to be the duty of an examiner to not only ascertain but verify the liabilities and resources of an association and make such an estimate of the value of the latter as will enable the Comptroller upon his report to determine with reasonable certainty whether or not impairment of capital or insolvency exists.

So far as can be deduced from the provisions of the act under which national-banking associations are organized and operated, an examiner's duties are above substantially set forth. In the letter of instructions addressed to examiners, and upon the blank reports furnished for their use are found directions covering the requirements of the law as above expressed. Much, however, must be left to the discretion and intelligence of the examiner himself. No cast-iron rules, covering minute details, can be issued to examiners as a class, for the reason that what would be practicable, proper, and necessary in the case of a small bank located in some obscure hamlet, would not be applicable in the case of a large association in a central reserve city.

As a rule examiners find the greatest difficulty in so directing their efforts as to ascertain whether or not impairment or insolvency exists. They are directed to verify every credit and debt balance, to personally count the cash, and to list and verify the loans and discounts and other assets of the association. This verification can not, of course, be exhaustive, for the reason that the compensation awarded examiners by law would not cover the time necessarily employed to this end. Nor would national banks, as a class, be willing to surrender their books and suffer interference with their business for a sufficient length of time to permit the examiner to make a complete audit of their affairs, even if they were willing to submit to the expense necessarily attending it.

The liabilities of a bank are represented to a large extent by pass books in the hands of a multitude of depositors, by drafts issued to a large number of purchasers and by them transmitted to distant points, a large amount (several days' issue at least) always being in transit and unpaid; in certificates of deposit and other like evidences of indebtedness held by persons unknown and inaccessible to the examiner, in balances due to other banks, and in bills payable and rediscounts, usually in the hands of distant correspondents of the association.

It is obvious, therefore, that it would be absolutely impracticable for the examiner to make such a complete verification as would demonstrate beyond question that the entries stating these liabilities upon the books of the bank precisely correspond with the amounts represented by these various evidences of indebtedness. Some of these accounts may in a certain degree be verified by correspondence with the distant creditors, but to call in all the pass books, certificates of deposit, and drafts in transit would be obviously impracticable.

The examinations, and reports based thereon, have undergone a gradual process of evolution during the more than quarter of a century that the national-banking system has been in existence. From year to year the attention of the Comptroller has been called to new and novel devices adopted by those who sought to cover up their criminality or prevent the discovery of serious losses. This has led to increased vigilance upon the part of examiners and to the adoption of such measures as would, so far as possible, prevent the success of such devices in the future. So, under the exigencies of the service the scope and details of examinations have undergone gradual transforma-

tion and enlargement, making them more and more effective and valuable as the age of the system and experience in the wiles of dishonest bank officials increase.

The small losses suffered by creditors of national banks in the past have led some part of the general public to feel that governmental supervision should be of such a character as to absolutely prevent these associations from becoming insolvent, and that in case such failures occur those charged with the administration of the law are necessarily derelict in duty. It is apparent, however, that such is very far from being the case. It will be observed that the duties of the Comptroller, and in some sense the examiners, are largely negative; that the law consists in large part of necessary limitations and restrictions upon the operations of the associations organized under its authority. The Comptroller is therefore mainly charged with the responsibility of indicating to bank managers what they shall not do.

The affairs of each association are, however, wisely placed under the control of a board of directors elected by the shareholders, which is alone vested with the power to direct its management. It is apparent that it would be impracticable for any Bureau of the General Government to undertake to participate to any degree in the receiving of deposits, in the making of loans, and in the thousand details incident to the management of each particular bank. It would be in the highest degree unfortunate and unwise for the Government to attempt to usurp in any manner the duties which are and must be devolved upon the representatives of the shareholders of the various banks—upon its directors and officers.

That the limitations and restraints imposed by the national-bank act, supplemented by the periodical reports required and published, have done much to promote the success of the banks constituting the national system, and the security of the various creditors is demonstrated by its history. It is, however, indisputable, and conceded by all those informed as to the facts, that the system of examinations provided for in the brief paragraph quoted at the beginning of this article is of paramount importance and absolutely indispensable to the conspicuous success which has attended the operations of these associations from the inauguration of the system.

The officers directly in charge of the various banks and the employés to whom are committed the details incident to the proper conduct of the business, are actuated by the same motives which inspire humanity generally and are subject to the same temptations and the same ambitions. In the opinion of the Comptroller, every such officer and employé will admit that the expected visit of a skilled examiner who is to inspect and criticise the work upon which he is engaged incites him to greater diligence, promptness, and accuracy, tends to deter him from entering upon operations inconsistent with good banking, and strengthens him in his efforts to overcome those temptations to disobey the law which come to every bank manager through the pressure of customers in the most varied and insidious forms.

That the visits of an examiner should be always welcome to those in charge of a bank is not to be expected. Those, however, who are conscious of having discharged their duties with fidelity and ability gladly welcome the inspection of an expert who can properly appreciate the results of their faithfulness. The officer in charge who earnestly desires an honorable and successful career will gladly accept the services of one who can aid him in verifying the various accounts of the bank and in establishing the fidelity and ability of those subordinates who are en-

trusted with the details of business. The directors of any association who are disposed to fulfill the important duties imposed by law and to merit the confidence reposed in them by their shareholders, hail with pleasure the visit of one whose sole object is to reinforce their efforts to contribute to the safety and success of the institution which has been committed to their care and direction.

Unfortunately dereliction of duty on the part of directors is the chief cause of failure upon the part of corporations generally and of national banks particularly. It is this inattention to duty upon the part of those chosen to represent the shareholders in the management of national banks which has made the visits of the examiner an absolute necessity.

It has become a habit on the part of the general public whenever the failure of a national bank occurs to at once challenge the integrity or skill of the examiner charged with its supervision, oblivious of the fact that his energy, his experience, and his devotion to duty may have prevented the failure of a score of more or less embarrassed institutions as to whose mismanagement they are of necessity entirely uninformed.

The bank examiner as a rule faithfully discharges his duty. Every disobedience of law, and everything indicating impairment of capital, insolvency, or criminality are in most instances faithfully reported to the Comptroller of the Currency. In every such case the Comptroller applies the remedy named in the law. If the report indicates a minor disobedience of law or of the rules of sound banking, caution or reproof is administered. If impairment of capital is indicated he immediately issues a notification that it be made good by assessment upon the shareholders. In case insolvency is shown to his satisfaction a receiver is appointed.

The great service performed through the agency of bank examiners consists largely, however, in meeting dangerous and unlawful practices at the threshold. The number of cases of this kind which have been arrested at the beginning, and severe loss, if not insolvency, prevented by the prompt and timely action of bank examiners is very great, although necessarily unknown to the general public, and hence unappreciated by those whose interests have been protected.

The Comptroller feels the need continually of one or more supervising examiners of approved skill and unquestioned integrity who might visit the various examiners in the field and bring the work into greater uniformity and in many ways increase its efficiency. Although the instructions are explicit and the blanks so arranged as to constantly remind these officers of what a complete examination should consist, yet the Comptroller can not always feel assured that these are fully understood and faithfully obeyed. And, again, when failures multiply and exigencies arise making extra precautions necessary, the services of one or more conspicuously capable examiners who are not permanently assigned to any particular district would be invaluable.

The Comptroller also calls attention to the fact that assistant examiners are needed in all the large cities, and that no such office now exists.

He therefore recommends that the law be so amended as to provide for the appointment of not more than three supervising examiners who shall receive an annual salary to be paid from the public funds; that the Comptroller be empowered to appoint as many assistant examiners as may in his judgment be necessary, to be paid such compensation as may be fixed by the Comptroller from the fees of the examiners by whom they are employed.

That each supervising examiner, examiner, and assistant examiner be required to take an oath before entering upon the discharge of his duties, and also to give bonds in such amount and with such sureties as may be satisfactory to the Comptroller.

CERTIFICATES OF STOCK.

Section 5139 of the Revised Statutes of the United States provides that "The capital stock of each association shall be divided into shares of one hundred dollars each, and be deemed personal property, and transferable on the books of the association in such manner as may be prescribed in the by-laws or articles of association."

The reports of examiners indicate that too little care is taken in the transfer of stock and in the issuing of certificates. In many cases boards of directors neglect to prescribe in the by-laws the manner in which the transfers are to be made, and, as a rule, the articles of association are silent upon the subject.

In other instances the by-laws set forth in general terms the manner in which such transfers shall be effected, but it is frequently found that they are not obeyed, and that the transfers are of a very irregular character, and in many cases not lawfully executed. In some banks no stock ledger is found; in others, certificates are signed in blank and left for some subordinate to fill out and deliver when occasion shall require. In other banks certificates surrendered for transfer are not properly cancelled and preserved, and in newly organized banks they are occasionally issued to shareholders prior to their having paid in full for the same. Where banks are increasing their capital, certificates are sometimes issued before the increase has been submitted to and approved by the Comptroller.

These are a few examples of irregular practices on the part of banks which have been brought to the attention of the Comptroller by recent examinations.

The shareholders of national banks are its proprietors and the certificates of stock issued to them are the evidence of their proprietorship. The importance of preserving the record of such ownership is evidently not sufficiently appreciated. While it is true that overissues of stock are comparatively infrequent it is nevertheless the fact that examiners often find difficulty in verifying trial balances taken from stock ledgers. While in most cases this is simply an evidence of carelessness and lack of system, yet, the examiner can not always be sure that the future may not develop that a more serious condition exists.

One remedy suggested for this state of things is that all transfers of stock be registered by a corporation acting in the capacity of an agent for that purpose. This is a very valuable safeguard, and is comparatively convenient and inexpensive for banks situated in large cities. This plan is certainly worthy of investigation by all boards of directors, and it is recommended to their favorable consideration. The added value attached to shares by reason of this registration would, in the opinion of the Comptroller, exceed the slight cost which such registration would involve. As the system is, however, largely composed of banks with small capital, located outside of the larger cities, in a great majority of cases this plan would not be deemed feasible, and therefore the remedy, so far as it applies to the system generally, must be found in the greater care and activity of the directors of the several associations. They should first see that proper by-laws regulating the transfer of shares are adopted. Proper books should be furnished for recording the transfer of shares, in accordance with the terms of the by-laws, and

provision made for the frequent examination of the certificate book, stock ledger, and transfer book by a committee charged with this special duty.

The signing of certificates in blank should be forbidden, and great care should be exercised in the cancellation and preservation of surrendered certificates. As it is important in the enforcement of the individual liability of shareholders in the case of insolvent banks whose assets prove insufficient to pay their debts that the question of proprietorship should be definitely determined, it is recommended that a receipt be taken from each shareholder upon delivery to him of the certificate representing the stock of which he is the owner.

OFFICERS AND DIRECTORS AS BORROWERS.

While the failures of the year just closed have been in large part due to well-defined causes, which have been operating with more or less severity in all parts of the civilized world, supplemented by the local influences to which allusion has been made, it is evident that some features of the more important ones are suggestive of needed changes in the national-bank act. In almost every instance an investigation of the affairs of an insolvent bank discloses the fact that the officers and directors have too freely used the funds of the association for their own purposes, either in a lawful or unlawful manner.

The facility with which the active officers of a bank may borrow its funds seems to make it necessary that some added restriction should be placed upon transactions of this kind.

In the organization of a national bank those who contribute the funds which constitute its capital should dedicate the same to the business of banking, and not to the creation of an instrumentality through which they may proceed to borrow to an amount largely in excess of the sum contributed by them to the original capital.

The principal limitation as to loans and discounts is found in section 5200 of the Revised Statutes of the United States, which reads as follows:

The total liabilities to any association, of any person, or of any company, corporation, or firm, for money borrowed, including in the liabilities of a company or firm the liabilities of the several members thereof, shall at no time exceed one-tenth part of the amount of the capital stock of such association actually paid in. But the discount of bills of exchange drawn in good faith against actually existing values, and the discount of commercial or business paper actually owned by the person negotiating the same, shall not be considered as money borrowed.

This limitation is found to be wholesome in its general application, but recent events indicate that additional safeguards are needed.

In my opinion some limitation should be placed upon the amount of commercial or business paper which may be discounted by an association for any person, company, corporation, or firm, and a similar restriction should be placed upon indirect liabilities resulting from guaranty or endorsement. If it is deemed necessary to limit direct loans to 10 per cent of the capital paid in it would for the same reason follow that indirect liabilities should be subject to some limitation. Just what the extent of the restrictions should be is not so easily determined, but, in my judgment, the direct and indirect liabilities, in the case of a director, should not exceed 20 per cent of the capital paid in.

The active officers of the bank, who are charged with the custody of its assets and the handling of its funds, should not, in my opinion, be permitted to appear as borrowers or become in any way liable to the association with which they are connected. While this might work hardship in exceptional cases it would without doubt add greatly to the se-

curity of the creditors of the banks as a whole. It would be unwise to forbid an association to loan to or discount for its several directors, as they are usually selected from among the leading men in the various branches of business, for the reason that they possess information which is of great value in passing upon paper offered by those engaged in the same line of trade with themselves.

There seems to be no serious objection, however, to placing some limit upon their indirect as well as direct liabilities. The Comptroller, therefore, takes this opportunity to recommend that the active officers of a bank be excluded from incurring liabilities to the association with which they are connected, and that the direct and indirect liabilities of a director be confined to 20 per cent of the paid-up capital, leaving the limitations contained in section 5200 United States Revised Statutes intact. The Comptroller is also of opinion that the publication of the liabilities of officers and directors would afford a valuable safeguard.

The Comptroller also desires to call attention to the fact that no suitable penalty is provided by law for violations of section 5200 United States Revised Statutes.

Aside from the power to bring suit for forfeiture of franchise under the general provisions of law laying the groundwork for enforcing the liability of directors, the Comptroller is without the power to enforce obedience to the limitations of the section quoted. The remedy provided is so severe as to make it entirely useless, no Comptroller having ever brought suit to forfeit the franchise of an active bank. The reason for this is obvious, as such a proceeding would destroy the bank, thereby greatly aggravating instead of affording a remedy for the evil complained of. The Comptroller should be empowered by law to inflict such a penalty, by way of fine or assessment, as would make excessive loans highly unprofitable, and yet not so severe as to prevent its being promptly and invariably imposed in every case brought to his notice.

BONDS OF BANK OFFICERS.

Circumstances attending recent failures have served to call the attention of the Comptroller to the fact that much greater care should be exercised by boards of directors in the matter of the official bonds of the officers and employes of their several banks.

The general verdict of those most experienced in the management of banks is in favor of requiring official bonds from all who occupy places of trust, and especially those who handle cash or convertible securities. Under the national-bank act it is left discretionary with boards of directors whether or not they shall require official bonds. This matter should be taken up, fully discussed, and definitely decided by each board of directors.

At the time of organization the matter usually has attention and certain requirements are decided upon but are inefficiently carried out. Frequently the by-laws of an association contain all that is necessary in relation to bonds, but the reports of bank examiners disclose the fact that these by-laws often become obsolete by reason of inattention to their enforcement.

There are various phases of this subject which should be considered by those responsible for the management of a bank. In the first place it is necessary that the board of directors should decide as to the particular officers and employes who shall give official bonds and determine upon the amount in each case. Ordinarily this covers the entire action of the board in relation to the matter. This, however, does not consti-

tute the full measure of their duty. Great care should be taken in preparing the form of the bond required so that in case it becomes forfeited the penalty can be enforced. Not only should the form of the bond have careful attention but its terms should be such as to cover not only criminal acts but such as involve a lack of due diligence on the part of the officers or employés.

In this connection it is proper to say that the Comptroller is in receipt of information, from a source which entitles it to the highest consideration, that bonds are habitually offered and frequently accepted which guarantee the bank only against such misconduct of the officer as amounts to embezzlement or larceny and do not secure it against gross carelessness or against connivance at or the overlooking of its spoliation by others.

This warning should be heeded and every board of directors should promptly order an examination of all official bonds in their custody by competent counsel so that their bank may not suffer through their neglect when an exigency arises.

Again, it is important that the sureties should be of such a character as to insure the collection of the penalty in case of forfeiture. If the surety is an incorporated company, as is common now, its solvency should be fully ascertained, and the necessary information procured as to its right to enter into such a contract under its charter. It is also important that this class of bonds should be examined with especial care as to whether they are broad enough in their terms to properly protect the bank in case of the unfaithfulness of the principal.

In case natural persons are accepted as surety similar care should be exercised. No one should be accepted as surety upon such a bond whose responsibility for the penalty is not fully established. In addition to this it is well to reject all those who are not of such high character and established integrity as to unhesitatingly meet any losses which may occur, regarding it as a moral as well as a legal obligation.

It is quite frequently the case that a bond prepared and executed, with satisfactory sureties, is found in the custody of or accessible to the identical officer for whose faithful performance of duty it is the bank's only security. It is the duty of every board of directors to see that the custody of these bonds is committed to those who can have no interest in their becoming mislaid or destroyed, and who will faithfully keep and produce them when wanted.

The bond having been properly prepared and executed, signed by sureties known to be responsible and deposited in secure hands, it remains for the board of directors to make a periodical examination in order that their existence and safety may be verified, and for the further purpose of ascertaining that the security once deemed satisfactory has not become impaired by death, removal, insolvency, or some other cause which would put the interests of the bank in jeopardy.

At the regular annual visit of the examiner inquiry is made as to whether the by-laws require official bonds, and if so whether or not they have been executed in accordance therewith, and also as to their custody. He is instructed to call the attention of officers to any circumstances developed by his examination which would tend to impair the security of the association. His suggestions in relation to this matter, however, are usually necessarily made to the active officers of the bank, who are the identical persons from whom official bonds are required. It is often impracticable for him to call the attention of the board of directors of the bank to the necessity for the desired action in a given case.

The danger lurking here is greatly aggravated by the fact that, as a

rule, the active officers possess the unbounded confidence of the board of directors, and this confidence generally remains unshaken until the commission of some act which makes necessary a resort to the sureties upon the official bond.

Unless the precautions above alluded to have had attention prior to the discovery of the unfaithfulness of the trusted officer or employé the directors awaken too late to the fact that they have been derelict in duty.

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RESUMPTION OF BUSINESS BY CLOSED BANKS.

A conspicuous feature of the operations of this Bureau for the report year has been the resumption of business by banks which had voluntarily closed their doors to business.

Ordinarily the closing of a national bank serves to so greatly impair its credit as to render its resuscitation both impracticable and undesirable. In most cases the dishonesty or mismanagement which necessitates the closing of its doors causes such an impairment of confidence as to prevent the bank, even under new and competent management, from regaining its former position and securing the necessary support from the general public.

Ordinarily it is deemed better to organize a new association, with an entirely new title, than to endeavor to reopen one which has been closed. Occasionally, however, it occurs that the closing of a bank may result from causes which neither seriously affect its credit nor greatly impair its capital. In some such cases the confidence of the community is not withdrawn, and the good will of the association, which may have had a long and honorable career, is deemed by its shareholders worthy of preservation.

It has been the policy of the Comptroller in every such case to encourage the adoption of measures that would enable him to withdraw the examiner or receiver and permit the bank to resume business at as early a date as possible. He has, however, invariably made it a condition precedent that the affairs of the association should be put in a satisfactory condition. This would imply that its capital should be unimpaired, that its cash should be substantially equal to its demand liabilities, and that all doubtful and worthless assets should be eliminated; that all its affairs should be placed in strict compliance with law and such changes made in its board of directors and officers as would exclude those who had been guilty of mismanaging its affairs, and generally such measures enforced as would insure a prudent, conservative, and law-abiding course in the future.

This policy has only been adopted in cases where the Comptroller was led to believe that the conditions were, to a marked degree, favorable to a successful future career.

The failure of a bank is always a calamity, even when the assets of the failed institution are sufficient to ultimately pay in full its liabilities. The delay necessarily incident to converting these assets into cash and dividing them among the several claimants is the cause of much inconvenience and loss to a large number of depositors.

A national bank is organized for the purpose of conducting a commercial business, and is ordinarily the depository for the current cash receipts of persons engaged in every form of manufacturing, industrial, and commercial business. Most of these enterprises are conducted with capital barely sufficient to form a basis of credit, the latter being mainly

relied upon and of, by far, the greater importance. Every such firm engaged in business is liable to have its credit destroyed by the locking up of its cash resources, resulting in the dishonoring of its paper and subsequent failure.

All classes, however, are represented among the creditors of these insolvent banks. The desire to find a safe depository for funds temporarily idle moves all alike. The rich and the poor, young and old, capitalist and laborer, all appear as claimants.

An investigation of the affairs of an insolvent bank invariably discloses cases of peculiar hardship and frequently brings to light such misfortunes as are calculated to arouse the sympathies of the most indifferent. It is therefore a matter of great importance to the creditors of a failed association that their balances be made available at the earliest date practicable.

Not only are the creditors of a failed association greatly benefited by its being speedily reopened for business but shareholders also, for it is a well-established fact that the assets of such an association are much more valuable to it as an active bank than if in liquidation or in the hands of a receiver.

As a result of the policy outlined above six national banks, which closed their doors to business, possessing an aggregate capital of \$2,225,000 and having liabilities amounting to \$3,756,362, have been permitted to resume business since the 1st day of January, 1891. One other bank, closed by order of the Comptroller, having a capital of \$300,000 and liabilities amounting to \$622,221, was permitted to go into voluntary liquidation, the directors and principal shareholders of the bank having provided the necessary funds to meet all liabilities.

HIGHEST AND LOWEST POINTS REACHED IN THE PRINCIPAL ITEMS OF RESOURCES AND LIABILITIES SINCE THE ESTABLISHMENT OF THE SYSTEM.

	January 1, 1866.	September 25, 1891.	Highest point reached.		Lowest point reached.	
			Amount.	Date.	Amount.	Date.
Capital	\$403,357,346	\$677,426,870	\$677,426,870	Sept. 25, 1891	\$403,357,346	Jan. 1, 1866
Capital surplus and undivided profits	475,330,204	1,008,288,030	1,008,288,030	.....do.....	475,330,204	Do.
Circulation	213,239,530	131,323,301	341,320,256	Dec. 26, 1873	122,928,084	Oct. 2, 1890
Total investments in United States bonds	440,380,350	174,907,550	712,437,900	Apr. 4, 1879	170,653,050	Do.
Individual deposits	520,212,174	1,588,318,081	1,588,318,081	Sept. 25, 1891	501,407,586	Oct. 8, 1870
Loans and discounts	500,650,109	1,989,354,239	1,989,354,239	.....do.....	500,650,109	Jan. 1, 1866
Cash						
National bank notes	20,406,442	19,991,167	28,800,609	Dec. 31, 1883	11,841,104	Oct. 7, 1867
Legal-tender notes	187,846,548	97,615,608	205,723,579	Oct. 1, 1886	52,156,439	Mar. 11, 1881
Specie	16,909,363	183,515,076	195,908,859	Oct. 2, 1890	8,050,330	Oct. 1, 1875

It will be seen that capital, surplus, undivided profits, and deposits have increased from \$995,542,378 in January, 1866, to \$2,596,606,111 on September 25, 1891, and that loans and discounts amounting to \$500,650,109 have reached the sum of \$1,989,354,239, which is nearly quadruple, and upon reference to other pages in this report that the number of active banks has increased from 1,582 to 3,677. The holdings in bonds have decreased from \$440,380,350 to \$174,907,550, but on April 4, 1879, an intermediate period, the banks held \$712,437,900. The specie held by the banks on January 1, 1866, amounted to \$16,909,363, was only \$8,050,330 in 1875, and amounted to \$183,515,076 on September 25, 1891, which was a falling off of more than \$12,000,000 since October 2, 1890, on which date the highest point was reached.

The following comparative statement gives the percentages of loans and discounts, United States bonds, and specie to the entire fund with which the banks do business, which is made up of capital, surplus, undivided profits, circulation, and deposits.

In 1866 the percentage of circulation to capital, surplus, and undivided profits was about 45 per cent, and is now about 13 per cent, the same as last year.

	1866.	1887.	1888.	1889.	1890.	1891.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Loans and discounts.....	41.32	70.52	71.04	72.26	74.37	72.92
United States bonds.....	36.36	9.98	9.87	7.80	6.44	6.41
Specie.....	1.57	7.37	11.90	6.58	7.40	6.73
Total.....	79.25	87.87	92.81	86.64	88.21	86.06

CIRCULATING NOTES.

The actual circulation outstanding on September 25, 1891, for which the banks were responsible was \$134,897,243, this amount being exclusive of \$37,002,875 also in circulation but represented by lawful money deposited by the banks for redemption purposes whenever the notes are received by the Treasurer.

The minimum deposit of the bonds required of the 3,677 national banks in operation September, 25, 1891, was \$104,933,987, upon which only \$94,440,589 of national-bank circulation could be issued. These banks held, on September 25, \$150,035,600 of bonds, and were actually responsible for \$40,456,654 of circulation more than the minimum. Some banks do not take circulation.

Of the 3,677 banks 2,651 have a capital not exceeding \$150,000 nor less than \$50,000 each, which is the lowest amount any bank in the system may have, the aggregate capital amounting to \$214,126,010. The remaining 1,026 have a capital of over \$150,000 each, the aggregate amounting to \$463,300,860. If an amount of bonds equal to the total capital were deposited to secure circulation the whole body of banks might have a circulation amounting to \$609,684,183, or \$515,243,594 more than the present minimum. A table in the Appendix,* page 141, shows, by States and geographical divisions, this information in detail.

The following table shows the number of banks organized, by fiscal years, from July 1, 1882, to July 1, 1891, capital stock, amount of bonds deposited, and circulation issued thereon:

Year.	No.	Capital.	Minimum bonds required.	Bonds actually deposited.	Unit per cent of excess.	Circulation issued.
July 1, 1882, to July 1, 1883.....	251	\$20,552,300	\$5,153,500	\$7,116,400	28	\$6,404,700
July 1, 1883, to July 1, 1884.....	218	19,944,000	4,016,000	4,676,100	14	4,208,490
July 1, 1884, to July 1, 1885.....	142	15,205,000	3,061,250	3,332,800	8	2,999,520
July 1, 1885, to July 1, 1886.....	163	17,553,000	3,404,500	3,715,500	8	3,343,950
July 1, 1886, to July 1, 1887.....	217	31,444,000	4,986,000	5,051,800	1	4,546,170
July 1, 1887, to July 1, 1888.....	194	16,734,000	3,308,500	3,324,750	0.5	2,992,275
July 1, 1888, to July 1, 1889.....	156	15,970,000	3,155,000	3,166,300	.36	2,849,670
July 1, 1889, to July 1, 1890.....	291	36,055,000	6,261,250	6,262,750	.18	5,613,915
July 1, 1890, to July 1, 1891.....	239	27,680,000	5,082,500	5,083,500	.12	4,579,650
Total.....	1,841	207,137,300	38,420,500	41,734,400	.....	37,853,400

The foregoing table is perpetuated to show by comparison the falling off in the amount of bonds deposited in excess of the requirement, and it will be seen that the percentage of excess has fallen from 28 in 1882-'83 to .12 in 1889-'90. Of the 239 banks organized during the past fiscal year 143 have a capital of \$50,000 each, amounting to \$7,150,000; 56 have a capital of over \$50,000 and not exceeding \$150,000, aggregating \$5,280,000, and 40 have an aggregate capital of \$15,250,000. The 40 largest banks deposited the exact amount of bonds required by law, and of the remaining 199 banks only 4 deposited bonds in excess of the requirement.

Notwithstanding the continuous accession of new banks to the system, more than counterbalancing the number which fail or are placed in voluntary liquidation from year to year, the outstanding circulation steadily decreases.

The anomaly, however, is presented, as a result of operations during the past year, of an increased circulation for which the banks are responsible. This increase amounted to \$9,720,287, and was caused by the organization of new banks and additional deposits of bonds by banks already organized. The aggregate outstanding circulation, however, was reduced by the redemption of \$19,400,679, for which lawful money had been deposited, leaving a net decrease of \$9,680,392.

By referring to page 366 it will be observed that the total withdrawal of bonds, for transfer to the Secretary for purchase or redemption, amounted to \$32,378,800, nearly the whole amount being substituted by other bonds.

SECURITY FOR CIRCULATING NOTES.

The security for circulating notes of national banks is limited, by the Act, to United States registered bonds bearing interest, and the following table shows the amount of such bonds held by the Treasurer of the United States as security on June 30 of each year from 1865 to 1891, inclusive, and the amount owned and held by the banks for other purposes, including those deposited with the Treasurer to secure public deposits:

Years.	United States bonds held as security for circulation.					United States bonds held for other purposes at nearest date.	Grand total.
	5 per cent bonds.	5 per cent bonds.	4½ per cent bonds.	4 per cent bonds.	Total.		
1865 ..	\$170,382,500	\$55,576,600	.....	.....	\$225,959,100	\$155,785,750	\$381,744,850
1866 ..	241,083,500	86,226,450	.....	.....	327,310,350	121,152,050	448,462,400
1867 ..	251,430,400	89,177,100	.....	.....	340,607,500	84,002,650	424,610,150
1868 ..	250,726,950	90,708,950	.....	.....	341,435,900	80,922,500	422,358,400
1869 ..	255,190,350	87,661,250	.....	.....	342,851,600	55,102,000	397,953,600
1870 ..	247,335,350	94,923,200	.....	.....	342,278,550	43,980,600	386,269,150
1871 ..	229,497,750	139,387,800	.....	.....	359,885,550	39,450,800	399,336,350
1872 ..	173,251,450	207,189,250	.....	.....	380,440,700	31,868,200	412,308,900
1873 ..	160,923,500	239,487,050	.....	.....	390,410,550	25,724,400	416,134,950
1874 ..	154,370,700	236,809,500	.....	.....	391,171,200	25,347,100	416,518,300
1875 ..	135,955,100	239,359,400	.....	.....	375,314,500	26,900,200	402,214,700
1876 ..	109,313,450	232,081,300	.....	.....	341,394,750	45,170,300	386,565,050
1877 ..	87,690,300	206,651,050	\$44,372,250	.....	338,713,600	47,315,050	386,028,650
1878 ..	82,421,200	199,514,550	48,448,650	\$19,162,000	349,546,400	68,850,900	418,397,300
1879 ..	56,042,800	144,616,300	85,056,550	118,538,950	354,254,600	76,603,520	430,858,120
1880 ..	58,666,150	139,758,650	37,769,950	126,676,300	362,871,050	42,831,300	405,702,350
1881 ..	61,901,800	172,348,350	32,600,500	93,637,700	360,488,400	63,849,950	424,338,350
Continued at 3½ per cent.	Continued at 3½ per cent.	Continued at 3½ per cent.	Continued at 3½ per cent.	Continued at 3½ per cent.	Continued at 3½ per cent.	Continued at 3½ per cent.	Continued at 3½ per cent.
1882 ..	25,142,600	202,487,650	32,752,650	97,429,800	357,812,700	43,122,550	400,935,250

Years.	United States bonds held as security for circulation.					United States bonds held for other purposes at nearest date.	Grand total.
	6 per cent bonds.	5 per cent bonds.	4½ per cent bonds.	4 per cent bonds.	Total.		
1883 ..	\$385,700	\$7,402,800 3 per cents. } 209,877,850	\$32,408,500	\$104,954,650	\$353,029,500	\$34,094,150	\$387,123,650
1884 ..		172,412,550	46,546,400	111,620,900	330,049,850	31,203,000	361,252,850
	Pacifics:						
1885 ..	3,520,000	142,240,850	48,483,050	117,901,300	312,145,200	32,195,800	344,341,000
1886 ..	3,565,000	107,782,100	50,484,200	114,143,500	275,974,800	31,345,550	307,320,350
1887 ..	3,175,000	5,205,950	67,743,100	115,842,650	191,966,700	33,147,750	224,814,450
1888 ..	3,181,000	37,500	69,670,300	105,423,850	178,312,650	63,618,150	241,930,800
1889 ..	4,324,000		42,409,900	101,387,550	148,121,450	51,642,100	199,763,550
1890 ..	4,915,000		39,486,750	100,828,550	145,238,300	35,287,350	180,515,650
1891 ..	7,957,000		22,565,950	111,985,950	142,508,900	30,114,150	172,623,050

The following table gives similar information for the years ended October 31, from 1882 to 1891, inclusive. An examination of this and the foregoing table will disclose the changes which have occurred in the holdings of the several classes of bonds by the banks:

Year.	Number of banks.	United States bonds held as security for circulation.					United States bonds held for other purposes at nearest date.	Grand total.
		4½ per cent bonds.	4 per cent bonds.	3 per cent bonds.	Pacific 6 per cent bonds.	Total.		
1882	2,301	\$33,754,650	\$104,927,500	\$40,621,950 179,675,550	\$3,526,000	\$362,505,650	\$37,563,750	\$400,069,400
1883	2,522	41,319,700	106,164,850	* 602,000 201,327,700	3,463,000	352,877,300	30,674,050	383,551,350
1884	2,671	49,537,450	116,705,450	155,604,400	3,469,000	325,316,300	30,419,600	355,735,900
1885	2,727	49,547,250	116,391,050	138,920,650	3,505,000	308,364,550	31,780,100	340,144,650
1886	2,868	57,436,850	115,383,150	69,038,050	3,586,000	245,444,050	32,431,400	277,875,450
1887	3,061	69,696,100	115,731,400	144,500	3,256,000	188,828,000	34,671,350	223,499,350
1888	3,151	66,121,750	100,413,600		3,468,000	170,003,350	60,715,050	230,718,400
1889	3,319	41,066,150	100,049,000		4,553,000	145,668,150	48,501,200	194,169,350
1890	3,567	28,116,700	105,402,200		6,672,000	140,190,900	30,084,000	170,274,900
		199,400						
1891	3,694	Continued at 2 p. ct. 21,648,100	120,858,850		10,244,000	152,950,850	24,871,950	177,822,800

* Three and one-half per cent.

A table will be found in the Appendix*, page 125, showing on the first day of each month, from January 1, 1870, to November 1, 1891, the amount of authorized capital stock of the national banks, the amount of bonds on deposit to secure circulation, the amount of circulation secured by the bonds, the amount of lawful money deposited to redeem outstanding circulation, and the total amount outstanding including notes of gold banks.

INTEREST-BEARING FUNDED DEBT OF THE UNITED STATES.

The following statement is made to preserve continuity with respect to changes in the funded debt of the United States. The effect upon the holdings of bonds by national banks will be observed elsewhere. The public debt reached the maximum August 31, 1865, and then amounted to \$2,844,649,626, the non-interest-bearing obligations amounting to \$461,616,311, the interest-bearing debt being \$2,383,033,315. On October 31, 1891, the interest-bearing debt amounted to \$649,650,232.

The classes of bonds available as security for the circulating notes of national banks are shown in the following table, dates of authorizing acts, maturity of bonds, and rates of interest also being given.

BONDED DEBT AT DATES NAMED.

Date.	6 per cent.	5 per cent.	4½ per cent.*	4 per cent.†	6 per cent.‡	Total.
Aug. 31, 1862 ..	\$908,518,091	\$199,792,100	.....	.....	\$1,258,000	\$1,109,568,191
June 30, 1866 ..	1,008,388,469	198,528,435	.....	.....	6,042,000	1,212,958,904
June 30, 1867 ..	1,421,110,719	198,533,435	.....	.....	14,762,000	1,634,406,154
June 30, 1868 ..	1,841,521,800	221,588,400	.....	.....	29,080,000	2,092,190,200
June 30, 1869 ..	1,836,341,300	221,589,300	.....	.....	58,638,320	2,116,568,920
June 30, 1870 ..	1,764,932,300	221,589,300	.....	.....	64,457,320	2,050,978,920
June 30, 1871 ..	1,613,497,300	274,230,450	.....	.....	64,618,832	1,952,752,582
June 30, 1872 ..	1,374,883,800	414,567,300	.....	.....	64,623,512	1,845,074,612
June 30, 1873 ..	1,281,238,650	414,567,300	.....	.....	64,623,512	1,760,429,462
June 30, 1874 ..	1,213,624,700	510,628,050	.....	.....	64,623,512	1,788,876,262
June 30, 1875 ..	1,100,895,550	607,132,750	.....	.....	64,623,512	1,772,651,812
June 30, 1876 ..	984,999,650	711,685,800	.....	.....	64,623,512	1,761,308,962
June 30, 1877 ..	854,621,850	703,266,650	\$140,000,000	.....	64,623,512	1,761,512,012
June 30, 1878 ..	738,619,000	703,266,650	240,000,000	\$98,850,000	64,623,512	1,845,359,162
June 30, 1879 ..	510,932,500	640,905,500	250,000,000	679,878,110	64,623,512	1,952,330,622
June 30, 1880 ..	255,780,400	484,464,900	250,000,000	739,347,800	64,623,512	1,774,616,612
June 30, 1881 ..	196,378,600	439,841,350	250,000,000	739,347,800	64,623,512	1,690,191,262
June 30, 1882 ..	Continued at ¾ per cent. 58,957,150	Continued at ¾ per cent. 401,593,900 32,082,600	250,000,000	739,349,350	64,623,512	1,514,433,012
June 30, 1883 ..	.....	Funded into 3 per cents., act July 12, 1882. 304,204,350	250,000,000	737,942,200	64,623,512	1,388,832,062
June 30, 1884 ..	.....	224,612,150	250,000,000	737,061,700	64,623,512	1,276,987,362
June 30, 1885 ..	.....	194,190,500	250,000,000	737,719,850	64,623,512	1,246,533,862
June 30, 1886 ..	.....	144,046,000	250,000,000	737,759,700	64,623,512	1,196,429,812
June 30, 1887 ..	.....	19,716,500	250,000,000	737,800,000	64,623,512	1,072,140,612
June 30, 1888 ..	.....	.....	222,207,050	714,177,400	64,623,512	1,001,007,962
June 30, 1889 ..	.....	.....	139,639,000	676,095,250	64,623,512	880,357,862
June 30, 1890 ..	.....	.....	109,015,750	602,193,500	64,623,512	775,832,762
June 30, 1891 ..	.....	.....	50,869,200	559,596,000	64,623,512	675,068,712
Oct. 31, 1891 ..	.....	.....	Continued at 2 per cent. 25,364,500	559,573,150	64,623,512	649,561,162

* Funded loan 1891; authorizing act July 14, 1870, and January 20, 1871; date of maturity, 1891.

† Funded loan 1907; authorizing act July 14, 1870, and January 20, 1871; date of maturity, 1907.

‡ Pacific railroad bonds; authorizing act July 1, 1862, and July 2, 1864; date of maturity, 1895 to 1899. The Navy pension fund, amounting to \$14,000,000 in 3 per cents, the interest upon which is applied to the payment of naval pensions exclusively, and \$89,070 of refunding certificates are not included in the table.

MARKET PRICES OF UNITED STATES BONDS.

The investment value of United States bonds increases as the relative market price of such bonds declines. The $4\frac{1}{2}$ percents matured September 2, 1891, and it will be observed that the market price declined very regularly up to date of maturity. The fluctuation in prices of 4 percents was not considerable, the decline, however, being about double that during the previous year. The following table, prepared by the Acting Actuary of the Treasury, will show the movements in prices of the two classes during the year ended October 31, 1891:

OPENING, HIGHEST, AND LOWEST PRICES OF UNITED STATES REGISTERED $4\frac{1}{2}$ PER CENT AND 4 PER CENT BONDS, IN NEW YORK, FOR EACH WEEK FROM NOVEMBER 7, 1890, TO OCTOBER 30, 1891.

Week ended—	$4\frac{1}{2}$ per cent.			4 per cent.		
	Opening.	Highest.	Lowest.	Opening.	Highest.	Lowest.
Nov. 7, 1890.....	103 $\frac{1}{2}$	103 $\frac{1}{2}$	103	124-124 $\frac{1}{2}$	124-124 $\frac{1}{2}$	124-124 $\frac{1}{2}$
Nov. 14, 1890.....	103 $\frac{1}{2}$	103 $\frac{1}{2}$	103	123 $\frac{1}{2}$ -124	123 $\frac{1}{2}$ -124	122-123 $\frac{1}{2}$
Nov. 21, 1890.....	103 $\frac{1}{2}$	103 $\frac{1}{2}$	103	122-123	122-123	119 $\frac{1}{2}$ -121
Nov. 28, 1890.....	103 $\frac{1}{2}$	103 $\frac{1}{2}$	103	120-121 $\frac{1}{2}$	121-122 $\frac{1}{2}$	120-121
Dec. 5, 1890.....	103 $\frac{1}{2}$	103 $\frac{1}{2}$	103	120 $\frac{1}{2}$ -122	120 $\frac{1}{2}$ -122	120 $\frac{1}{2}$ -122
Dec. 12, 1890.....	103 $\frac{1}{2}$	103 $\frac{1}{2}$	103	120 $\frac{1}{2}$ -122	121-123	120 $\frac{1}{2}$ -122
Dec. 19, 1890.....	103 $\frac{1}{2}$	103 $\frac{1}{2}$	103	121-122 $\frac{1}{2}$	121 $\frac{1}{2}$ -122 $\frac{1}{2}$	121-122 $\frac{1}{2}$
Dec. 26, 1890.....	103 $\frac{1}{2}$	103 $\frac{1}{2}$	103 $\frac{1}{2}$	121-122 $\frac{1}{2}$	121 $\frac{1}{2}$ -122 $\frac{1}{2}$	121-122 $\frac{1}{2}$
Jan. 2, 1891.....	103 $\frac{1}{2}$	103 $\frac{1}{2}$	103 $\frac{1}{2}$	121 $\frac{1}{2}$ -122 $\frac{1}{2}$	121 $\frac{1}{2}$ -122 $\frac{1}{2}$	121-122 $\frac{1}{2}$
Jan. 9, 1891.....	103 $\frac{1}{2}$	103 $\frac{1}{2}$	103 $\frac{1}{2}$	121-122	121-122	120-122
Jan. 16, 1891.....	103 $\frac{1}{2}$	103 $\frac{1}{2}$	103	120-122	120-122	120-121 $\frac{1}{2}$
Jan. 23, 1891.....	103	103	103	120-121 $\frac{1}{2}$	120-121 $\frac{1}{2}$	120-121 $\frac{1}{2}$
Jan. 30, 1891.....	103	103	103	120-121 $\frac{1}{2}$	120-121 $\frac{1}{2}$	120-121
Feb. 6, 1891.....	102	102	101 $\frac{1}{2}$	120-121	120-121	120-121 $\frac{1}{2}$
Feb. 13, 1891.....	101 $\frac{1}{2}$	101 $\frac{1}{2}$	101 $\frac{1}{2}$	120-121	120-121	120-121
Feb. 20, 1891.....	101 $\frac{1}{2}$	101 $\frac{1}{2}$	101 $\frac{1}{2}$	120 $\frac{1}{2}$ -121	120 $\frac{1}{2}$ -121	120 $\frac{1}{2}$ -121
Feb. 27, 1891.....	101 $\frac{1}{2}$	102	101 $\frac{1}{2}$	120 $\frac{1}{2}$ -121	121-122	120 $\frac{1}{2}$ -121
Mar. 6, 1891.....	101 $\frac{1}{2}$	102	101 $\frac{1}{2}$	120-121	120 $\frac{1}{2}$ -121	120-121
Mar. 13, 1891.....	102	102	102	120 $\frac{1}{2}$ -121	121-122	120 $\frac{1}{2}$ -121
Mar. 20, 1891.....	102	102	102	121-122	121 $\frac{1}{2}$ -122	121-121 $\frac{1}{2}$
Mar. 27, 1891.....	102	102	102	121 $\frac{1}{2}$ -122	121 $\frac{1}{2}$ -122	121-122
Apr. 3, 1891.....	102	102	102	121 $\frac{1}{2}$ -122	121 $\frac{1}{2}$ -122	121 $\frac{1}{2}$ -122
Apr. 10, 1891.....	102	102	102	121 $\frac{1}{2}$ -122	122 $\frac{1}{2}$ -123	121 $\frac{1}{2}$ -122
Apr. 17, 1891.....	101 $\frac{1}{2}$	102 $\frac{1}{2}$	101 $\frac{1}{2}$	122-122 $\frac{1}{2}$	122-122 $\frac{1}{2}$	121 $\frac{1}{2}$ -122
Apr. 24, 1891.....	101 $\frac{1}{2}$	102	101 $\frac{1}{2}$	122-122 $\frac{1}{2}$	122-122 $\frac{1}{2}$	121-122
May 1, 1891.....	102	102	100	121-122	121-122	120 $\frac{1}{2}$ -121 $\frac{1}{2}$
May 8, 1891.....	100	100	100	120 $\frac{1}{2}$ -121	120 $\frac{1}{2}$ -121	120-121
May 15, 1891.....	100	100	100	120-121	120-121	119 $\frac{1}{2}$ -120
May 22, 1891.....	100	100	100	119 $\frac{1}{2}$ -120	119 $\frac{1}{2}$ -120	118 $\frac{1}{2}$ -119 $\frac{1}{2}$
May 29, 1891.....	100	100	100	118-118 $\frac{1}{2}$	119-119 $\frac{1}{2}$	118-118 $\frac{1}{2}$
June 5, 1891.....	100	100	100	118-118 $\frac{1}{2}$	119-120	118-118 $\frac{1}{2}$
June 12, 1891.....	100	100	100	118 $\frac{1}{2}$ -119	118 $\frac{1}{2}$ -119	117-117 $\frac{1}{2}$
June 19, 1891.....	100	100	100	117 $\frac{1}{2}$ -118	117 $\frac{1}{2}$ -118	117 $\frac{1}{2}$ -118
June 26, 1891.....	100	100	100	117 $\frac{1}{2}$ -118	117 $\frac{1}{2}$ -118	116 $\frac{1}{2}$ -117 $\frac{1}{2}$
July 3, 1891.....	100	100	100	116 $\frac{1}{2}$ -117	116 $\frac{1}{2}$ -117	116-117
July 10, 1891.....	100	100 $\frac{1}{2}$	100	116-117	116-117	116-117
July 17, 1891.....	100 $\frac{1}{2}$	100 $\frac{1}{2}$	100 $\frac{1}{2}$	116 $\frac{1}{2}$ -117	117-118	116 $\frac{1}{2}$ -117
July 24, 1891.....	100 $\frac{1}{2}$	100 $\frac{1}{2}$	100 $\frac{1}{2}$	117 $\frac{1}{2}$ -118	117 $\frac{1}{2}$ -118	117-118
July 31, 1891.....	100 $\frac{1}{2}$	100 $\frac{1}{2}$	99 $\frac{1}{2}$ -100	117 $\frac{1}{2}$ -118	117 $\frac{1}{2}$ -118	117-118
Aug. 7, 1891.....	99 $\frac{1}{2}$	100 $\frac{1}{2}$	99 $\frac{1}{2}$	116 $\frac{1}{2}$ -117	117-118	116 $\frac{1}{2}$ -117
Aug. 14, 1891.....	100 $\frac{1}{2}$	100 $\frac{1}{2}$	100 $\frac{1}{2}$	116 $\frac{1}{2}$ -117	116 $\frac{1}{2}$ -117	116 $\frac{1}{2}$ -117
Aug. 21, 1891.....	100 $\frac{1}{2}$	100 $\frac{1}{2}$	100 $\frac{1}{2}$	116 $\frac{1}{2}$ -117	117-118	116 $\frac{1}{2}$ -117
Aug. 28, 1891.....	100 $\frac{1}{2}$	100 $\frac{1}{2}$	100 $\frac{1}{2}$	116 $\frac{1}{2}$ -117	117 $\frac{1}{2}$ -118	116 $\frac{1}{2}$ -117
Sept. 4, 1891, $4\frac{1}{2}$ per cent.....	100 $\frac{1}{2}$	101	100 $\frac{1}{2}$			
Sept. 4, 1891, 2 per cent.....		99 $\frac{1}{2}$	99 $\frac{1}{2}$	117 $\frac{1}{2}$ -118 $\frac{1}{2}$	117 $\frac{1}{2}$ -118 $\frac{1}{2}$	116 $\frac{1}{2}$ -117 $\frac{1}{2}$
Sept. 11, 1891.....	99 $\frac{1}{2}$	99 $\frac{1}{2}$	99 $\frac{1}{2}$	116 $\frac{1}{2}$ -117 $\frac{1}{2}$	116 $\frac{1}{2}$ -117 $\frac{1}{2}$	116-117
Sept. 18, 1891.....	99 $\frac{1}{2}$	99 $\frac{1}{2}$	99 $\frac{1}{2}$	116-117	116-117 $\frac{1}{2}$	116-116 $\frac{1}{2}$
Sept. 25, 1891.....	99 $\frac{1}{2}$	99 $\frac{1}{2}$	99 $\frac{1}{2}$	115-116	116-116 $\frac{1}{2}$	115 $\frac{1}{2}$ -116 $\frac{1}{2}$
Oct. 2, 1891.....	99 $\frac{1}{2}$	99 $\frac{1}{2}$	99 $\frac{1}{2}$	115 $\frac{1}{2}$ -116	116-116 $\frac{1}{2}$	115 $\frac{1}{2}$ -116
Oct. 9, 1891.....	99 $\frac{1}{2}$	99 $\frac{1}{2}$	99 $\frac{1}{2}$	115-116	116-116 $\frac{1}{2}$	116-116 $\frac{1}{2}$
Oct. 16, 1891.....	100	100 $\frac{1}{2}$	100	116 $\frac{1}{2}$ -116	116 $\frac{1}{2}$ -117	116-116 $\frac{1}{2}$
Oct. 23, 1891.....	100 $\frac{1}{2}$	100	100	116 $\frac{1}{2}$ -117	116 $\frac{1}{2}$ -117	116 $\frac{1}{2}$ -117
Oct. 30, 1891.....	100	100	100	116 $\frac{1}{2}$ -117	117-117 $\frac{1}{2}$	116 $\frac{1}{2}$ -117

INVESTMENT VALUE OF UNITED STATES BONDS.

The following table, prepared by the Acting Actuary, shows the fluctuations in price and investment value of the $4\frac{1}{2}$ and 4 per cent bonds at quarterly periods from 1885 to 1891 inclusive:

Date.	$4\frac{1}{2}$ per cent bonds.		4 per cent bonds.	
	Average price flat.	Rate of interest realized by investors.	Average price flat.	Rate of interest realized by investors.
1885:	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
January	112.7788	2.055	121.9086	2.726
April	112.4359	2.488	121.8028	2.721
July	112.7525	2.365	122.6462	2.668
October	112.9421	2.250	123.4004	2.619
1886:				
January	112.7090	2.208	123.4325	2.607
April	112.4759	2.150	126.2980	2.444
July	111.8156	2.149	126.4975	2.420
October	111.9855	2.003	128.6659	2.289
1887:				
January	110.2775	2.290	127.8325	2.320
April	110.1947	2.019	129.2451	2.227
July	109.1475	2.340	127.8425	2.284
October	108.5583	2.339	125.7885	2.390
1888:				
January	108.2375	2.289	126.1275	2.341
April	107.1025	2.478	124.6400	2.409
July	107.5175	2.195	127.4825	2.230
October	108.4213	1.693	128.1204	2.178
1889:				
January	108.9255	1.254	127.2837	2.208
April	108.1848	1.240	129.1902	2.080
July	107.0048	1.421	128.3894	2.109
October	105.8241	1.645	127.1944	2.160
1890:				
January	104.7885	1.856	125.6178	2.236
April	103.7590	2.151	122.1175	2.435
July	103.3825	1.966	122.3200	2.407
October	104.1296	0.409	123.5602	2.309
1891:				
January	103.1106	0.424	120.9279	2.463
April	101.7596	1.363	122.0264	2.372
July	100.3846	5.971	117.8317	2.676
October			116.7546	2.701

BOND PURCHASES AND REDEMPTIONS BY THE TREASURY.

During the past report year, the purchase of 4 per cents was discontinued by the Government in the month of January, the total purchases amounting to \$8,645,850. Under Treasury circular dated October 9, 1890, the redemption of $4\frac{1}{2}$ per cents commenced, interest being added to the face of the bond up to and including August 31, 1891. Under the various circulars issued, the total redemptions of $4\frac{1}{2}$ per cents amounted to \$33,966,150, and the total purchased and redeemed of both classes to \$42,612,000. The total purchases and redemption of these two classes of bonds amounted to \$373,484,150 since the issue of circular dated April 17, 1888. Circular dated July 2, 1891, provided that any of the $4\frac{1}{2}$ per cents theretofore called for redemption might be presented for continuance during the pleasure of the Government, with interest at the rate of 2 per centum per annum, in lieu of redemption. A subsequent circular extended the time for presentation for continuance to September 30.

The amount of bonds so continued was \$25,364,500. On November 1, there were \$4,601,500 of this class of bonds which had not been presented for redemption or continuance. Of this amount the national

banks had on deposit to secure circulation \$199,400. The statutes require in the organization of a national bank a deposit of United States registered bonds bearing interest, and the few banks holding these bonds, being either indifferent or recalcitrant, were addressed by circular to substitute interest-bearing bonds without delay. The question had heretofore arisen as to the legal status of a bank having bonds on deposit which did not comply with the statutes, and the question, upon being referred to the Department of Justice, was decided adversely to the banks declining to withdraw non-interest-bearing bonds and substitute others.

STATEMENT SHOWING THE AMOUNTS OF 4 AND 4½ PER CENT BONDS PURCHASED AND REDEEMED EACH MONTH FROM NOVEMBER 1, 1890, TO OCTOBER 31, 1891, INCLUSIVE, ALSO THE AMOUNT OF 4½ PER CENT BONDS CONTINUED AT 2 PER CENT FROM SEPTEMBER 2, 1891.

Month.	4 per cent bonds purchased.	4½ per cent bonds redeemed.	Total purchased and redeemed.	4½ per cent bonds continued at 2 per cent from September 2, 1891.
November, 1890.....		\$2,790,850	\$2,790,850	
December, 1890.....	\$8,461,400	2,011,450	10,472,850	
January, 1891.....	184,450	1,689,750	1,874,200	
February, 1891.....		1,644,500	1,644,500	
March, 1891.....		1,989,050	1,989,050	
April, 1891.....		2,742,250	2,742,250	
May, 1891.....		242,800	242,800	
June, 1891.....				
July, 1891.....				\$11,679,500
August, 1891.....				11,236,300
September, 1891.....		17,940,100	17,940,100	2,448,700
October, 1891.....		2,915,400	2,915,400	
Total.....	8,645,850	33,906,150	42,612,000	25,364,500

BOND WITHDRAWALS BY NATIONAL BANKS.

The effect of the purchase and redemption of bonds during the year by the Treasurer upon the volume of circulation was inconsiderable; for, of the \$3,926,050 bonds withdrawn by the banks, and substitution not made upward of \$1,553,000 were withdrawn on account of failed and liquidating banks. Notwithstanding the withdrawal of \$2,372,500 on account of reducing banks, there was an actual increase in the amount of circulation, for which the banks are responsible, as will be seen elsewhere.

The following table shows the class and amount of bonds withdrawn by the banks, for purchase or redemption under Treasury circulars of October 9, December 6, 1890, June 2, July 2, August 24, September 2, and September 16, 1891, and the class and amount of bonds deposited from October 31, 1890, to November 1, 1891, together with the total withdrawals, on the deposit of lawful money, for which substitution was not made.

	Withdrawn.			United States bonds in substitution.					Total withdrawn upon deposit of lawful money.
	4½ per cent.	4 per cent.	Total.	2 per cent.	4 per cent.	4½ per cent.	P. R. R.'s 6 per cent.	Total.	
1890.									
Nov.	\$502,500	\$90,000	\$652,500		\$300,000		\$50,000	\$350,000	\$293,500
Dec.	357,750	187,500	545,250		224,000		12,500	236,500	308,750
1891.									
Jan.	409,500	153,500	855,000		342,500		180,000	522,500	332,500
Feb.	690,500	125,000	815,500		493,000		25,000	518,000	297,500
Mar.	1,280,250	313,500	1,593,750		1,015,250		131,250	1,146,500	447,250
Apr.	1,222,250	352,000	1,674,250		713,250	87,000	375,000	1,125,250	549,000
May.	209,500	125,000	434,500		217,000	25,000		242,000	192,500
June.	767,500	115,000	882,500		579,500	52,500	87,000	719,000	161,500
July.	10,581,050	241,500	10,822,550	\$9,457,300	854,750	102,500	50,000	10,466,550	156,000
Aug.	11,030,900	268,750	11,308,650	9,780,350	1,230,100		50,000	11,060,450	248,200
Sept.	2,476,100	388,750	2,864,850	1,517,500	379,500	100,000	60,000	2,057,000	807,850
Oct.	49,500	80,000	129,500						129,500
	29,536,500	2,442,500	32,378,800	20,755,150	6,380,850	287,000	1,020,750	28,452,750	3,926,050

ISSUES AND REDEMPTIONS.

The following table gives the number and amount of national-bank notes of each denomination which have been issued and redeemed since the organization of the system, and the amount outstanding October 31:

Denominations.	Number of notes.			Amounts.		
	Issued.	Redeemed.	Outstanding.	Issued.	Redeemed.	Outstanding.
Ones.....	23,169,677	22,802,425	367,052	\$23,169,677	\$22,802,025.00	\$367,052.00
Twos.....	7,747,519	7,656,646	90,873	15,495,038	15,313,292.00	181,746.00
Fives.....	112,285,252	102,256,905	10,028,257	561,426,260	511,284,975.00	50,141,285.00
Tens.....	47,495,288	42,117,309	5,377,889	474,952,880	421,173,990.00	53,778,890.00
Twenty.....	14,807,784	13,815,069	2,052,715	297,355,680	250,301,380.00	47,054,300.00
Fifty.....	1,996,974	1,808,128	188,846	99,848,700	90,406,400.00	9,442,300.00
One hundred.....	1,519,761	1,351,735	168,026	151,076,100	135,172,500.00	15,903,600.00
Five hundred.....	23,894	23,559	335	11,947,000	11,779,500.00	167,500.00
One thousand.....	7,379	7,337	42	7,370,000	7,337,000.00	33,000.00
Total.....	209,113,528	190,839,483	18,274,045	1,643,550,335	1,471,571,662.00	171,978,673.00
Unrepresented fractions of notes to be deducted from notes redeemed and added to amount of notes outstanding.....					26,288.75	26,288.75
Total.....					1,471,545,373.25	172,004,961.75

The discrepancy in the amount of circulating notes outstanding October 31, which will become apparent when the several statements in this report are compared, is explained as follows:

In the table on this page notes of national gold banks amounting to \$116,837 are not included, and the table on page 358 includes \$62,760, representing notes redeemed and destroyed to be reissued.

The total issues of incomplete currency during the year are shown by the vault account, as follows:

National-bank currency in vault October 31, 1890.....	\$42,504,380
Amount received from the Bureau of Engraving and Printing during the year ended October 31, 1891.....	48,628,400
Total.....	91,132,780
Amount issued to banks during the year.....	\$46,465,820
Amount canceled during the year, not having been issued.....	1,631,240
	48,097,060
Balance in vault October 31, 1891.....	43,035,720

The following table shows the amount of new currency issued to replace notes redeemed and destroyed under the provisions of the act of June 20, 1874, the amount issued to replace notes redeemed by lawful money deposited under the act of July 12, 1882, and the amount issued to both old and new banks upon bonds deposited for the purpose of obtaining additional circulation. The table also shows the amount of circulation redeemed under the act of June 20, 1874, establishing the national-bank redemption agency of The Treasury at Washington:

TABLE SHOWING BY STATES THE AMOUNT OF "ADDITIONAL CIRCULATION" ISSUED AND RETIRED DURING THE YEAR ENDED OCTOBER 31, 1891, AND TOTAL AMOUNT ISSUED AND RETIRED SINCE JUNE 20, 1874.

States and Territories.	Circulation issued.		Total issued.	Circulation retired.		Total retired.
	Under act of July 12, 1882.	Additional.		Under act of June 20, 1874.	Insolvent and liquidating banks.	
Maine		\$16,650	\$16,650	\$432,216	\$208,087	\$635,303
New Hampshire	\$10,220	16,870	27,090	302,354	108,433	410,787
Vermont		157,490	157,490	263,585	139,813	403,398
Massachusetts	45,000	2,683,020	2,678,020	3,640,935	1,367,268	5,008,203
Rhode Island		963,610	963,610	362,215	415,442	777,657
Connecticut	20	841,500	841,520	1,087,443	441,085	1,528,528
New York		2,725,200	2,725,200	2,654,472	1,215,915	3,870,387
New Jersey		112,070	112,070	637,419	231,166	868,582
Pennsylvania	21,520	1,855,175	1,876,695	1,997,760	1,081,094	3,079,454
Delaware				212,200	40,705	252,905
Maryland		351,010	351,010	284,062	232,985	517,047
District of Columbia		45,000	45,000	35,678	7,842	43,520
Virginia		265,500	265,500	54,040	70,920	124,960
West Virginia		86,625	86,625	58,935	58,756	117,691
North Carolina		54,000	54,000	34,962	31,356	66,318
South Carolina		73,345	73,345	25,792	26,930	50,722
Georgia		151,880	151,880	67,460	50,070	117,530
Florida		56,240	56,240		1,070	1,070
Alabama		11,250	11,250	29,280	29,430	58,710
Mississippi		11,250	11,250			
Louisiana		22,500	22,500	134,470	47,478	181,948
Texas		525,430	525,430	39,570	43,482	83,052
Arkansas		11,250	11,250	26,250	17,120	43,370
Kentucky		444,370	444,370	224,738	242,989	467,727
Tennessee		106,885	106,885	65,781	82,231	148,012
Missouri	30	322,250	322,280	111,462	84,463	195,925
Ohio		249,300	249,360	1,158,504	600,894	1,759,398
Indiana		56,250	56,250	320,135	204,596	524,731
Illinois		409,620	409,620	88,836	170,591	259,427
Michigan		135,010	135,010	62,539	162,776	225,315
Wisconsin		206,900	206,900	72,430	75,633	148,063
Iowa		320,850	320,850	91,123	101,922	193,045
Minnesota	15,370	80,990	96,360	49,891	65,014	114,905
Kansas		204,010	204,010	43,660	153,268	196,928
Nebraska		375,770	375,770	6,304	48,350	54,654
Nevada					10	10
Oregon		81,000	81,000	14,130	12,320	26,450
Colorado		336,385	336,385	69,304	25,230	94,534
Idaho		39,375	39,375	11,170	6,590	17,760
Montana		160,870	160,870	22,210	5,411	27,621
Wyoming		22,500	22,500	1,870		1,870
North Dakota		65,360	65,360		7,390	7,390
South Dakota		84,380	84,380		12,085	12,085
Washington		297,470	297,470	6,510	3,120	9,630
California		191,270	191,270	110,575	28,430	139,005
Utah		67,500	67,500	24,960	91	25,051
New Mexico		78,750	78,750	5,265	1,160	6,525
Arizona		11,700	11,700		890	890
Oklahoma		10	10			
Indian Territory		11,250	11,250			
Alaska						
Total	111,510	15,346,940	15,458,450	14,940,853	7,952,801	22,893,654
Surrendered to this office and retired						228,670
From June 20, 1874, to October 31, 1890			243,484,073	271,930,573	125,856,790	397,787,363
Surrendered and retired, same dates						16,031,498
Grand total, Oct. 31, 1890			258,942,523	280,871,426	133,809,501	436,938,585

Notes of gold banks are not included in the above table.

Of the above \$15,346,940 there were issued to banks organized during the year \$4,144,590, and to banks already existing and increasing their circulation \$11,202,350. No changes have been made during the past year in the provisions of law relating to the redemption of national-bank circulation, and the banks are substantially relieved from all requirements relating to redemptions, except those of keeping good a deposit of lawful money with the Treasurer equal to 5 per cent of their circulation, and the payment of a pro rata annual assessment for the cost of redemption.

During the past year the receipts of the National Bank Redemption Agency amounted to \$69,679,242, of which amount \$32,471,599, or 46 per cent, was received from New York City, and \$7,407,440 from the banks in the city of Boston. The amount received from Chicago was \$1,672,057; from Philadelphia, \$4,556,442; from Baltimore, \$1,781,695; from St. Louis, \$1,275,755; from Cincinnati, \$1,489,079; from New Orleans, \$1,015,000; from Providence, \$815,770, and from Pittsburg, \$517,127.

A certain proportion of notes received for redemption are fit for circulation, and are returned to the issuing banks. These notes amounted during the year ended October 31, 1891, to \$12,821,000.

The following table exhibits the amount of national-bank notes received monthly for redemption by the Comptroller of the Currency during the year ended October 31, 1891, and the amount received during the same period at the Redemption Agency of the Treasury, together with the total amount received since the passage of the act of June 20, 1874:

Received by the Comptroller of the Currency.						
Months.	For national banks in connection with reduction of circulation and replacement with new notes.	From the redemption agency.			Total.	Received at the United States Treasury redemption agency.
		For replacement with new notes.	For reduction of circulation under act of June 20, 1874.	Insolvent and liquidating national banks.		
November, 1890.....	\$40	\$1,655,575	\$1,391,644	\$716,381	\$3,773,640	\$4,327,087
December, 1890.....	1,800	1,926,180	1,267,692	667,015	3,862,687	4,711,836
January, 1891.....	90	2,538,155	1,665,876	793,864	4,997,985	9,443,920
February, 1891.....	30	2,379,959	1,542,947	734,203	4,657,130	4,953,537
March, 1891.....	20,380	2,671,005	1,599,624	839,361	5,130,970	5,115,459
April, 1891.....	560	2,190,289	937,007	651,430	3,729,277	5,048,370
May, 1891.....	12,079	3,317,449	1,360,936	719,862	5,410,268	7,262,701
June, 1891.....	41,095	3,504,200	1,450,405	821,394	5,817,094	7,506,764
July, 1891.....	55,620	3,306,090	1,053,221	644,696	5,059,627	6,808,612
August, 1891.....	40	1,909,696	778,884	421,192	3,109,866	4,981,998
September, 1891.....	40,095	2,749,765	1,042,270	623,943	4,456,073	4,710,379
October, 1891.....	5,040	2,875,760	800,347	419,560	4,100,707	5,188,589
Total.....	176,860	31,025,690	14,940,853	7,952,891	54,006,294	69,679,242
Received from June 20, 1874, to October 31, 1890.....	16,637,575	843,438,870	271,872,273	125,781,799	1,257,680,517	2,049,998,464
Grand total.....	16,814,435	874,464,560	286,813,126	133,684,690	1,311,776,721	2,117,677,706

Notes of gold banks are not included in the above table.

The following table exhibits the amount of national-bank notes received at this office and destroyed yearly since the establishment of the system:

Prior to November 1, 1865.....	\$175,490	During year ended October 31—	
During year ended October 31—		1861.....	\$54,941,120
1866.....	1,670,382	1862.....	74,917,611
1867.....	3,401,423	1863.....	82,813,766
1868.....	4,402,825	1864.....	93,178,418
1869.....	8,603,729	1865.....	91,048,723
1870.....	14,305,689	1866.....	59,989,810
1871.....	24,344,047	1867.....	47,726,093
1872.....	30,211,720	1868.....	59,568,525
1873.....	36,433,171	1869.....	52,207,627
1874.....	49,939,741	1870.....	44,447,467
1875.....	137,697,696	1871.....	45,981,493
1876.....	98,672,716	Additional amount of insolvent and	
1877.....	76,918,963	liquidating national banks.....	144,240,728
1878.....	67,381,249	Total.....	1,471,542,682
1879.....	41,101,830		
1880.....	35,539,660		

Notes of gold banks are not included in the above table.

There was in the vault of the redemption division of this office, awaiting destruction, at the close of business October 31, 1890.....	\$30,300.00
Received during the year ended October 31, 1891.....	54,114,094.50
Total.....	54,194,454.50
Withdrawn and destroyed during the year.....	53,953,154.50
Balance in vault October 31, 1891.....	241,300.00

REDEMPTION OF NOTES OF BANKS REDUCING CIRCULATION, OF THOSE IN VOLUNTARY LIQUIDATION, AND OF FAILED BANKS UNDER THE ACT OF JUNE 20, 1874.

This act provides for a reduction of the outstanding circulation of an association upon the deposit of lawful money with the Treasurer of the United States in sums of not less than \$9,000, and the act of July 12, 1882, requires a deposit of lawful money for the retirement of the old circulation of banks whose corporate existence has been extended.

Under these acts, and on account of liquidating and insolvent banks, \$454,844,949 of lawful money has been deposited with the Treasurer, including \$2,663,720 deposited for the redemption of notes of national gold banks, and \$97,756,232, for the redemption of national-bank notes under the act of July 12, 1882.

During the year ended October 31, 1891, \$3,545,358 in lawful money was deposited, \$1,878,282 of which was by banks reducing circulation, \$1,352,926 by banks in voluntary liquidation, \$70,398 by banks retiring old circulation issued prior to the extension of their corporate existence, and \$243,752 by insolvent banks.

The total amount deposited prior to and under the acts of June 20, 1874, and July 12, 1882, is \$469,089,759, and of this sum \$72,397,467 was deposited by banks in liquidation. Deducting from the total deposit the amount of circulating notes redeemed and destroyed without reissue, which was \$433,659,038, there remained in the hands of the Treasurer on October 31, 1891, \$35,430,721 in lawful money for the redemption and retirement of national-bank circulation, including \$116,837 for the redemption of the circulating notes of national gold banks.

Prior to June 20, 1874, national-bank notes amounting to \$10,431,135 were redeemed and destroyed without reissue, \$423,227,903 having been redeemed, destroyed, and retired since that date. The latter amount includes \$2,546,883 of the notes of national gold banks and \$78,121,644 of the notes of national banks whose corporate existence has been extended.

There are no national gold banks now in existence, and the lawful money on deposit with the Treasurer of the United States, amounting to \$116,837, represents the remaining outstanding circulation of these banks.

TAX UPON CIRCULATION, REDEMPTION CHARGES, AND ASSESSMENTS.

United States statutes subject national banks to the payment of a semiannual duty of one-half of 1 per cent upon the average amount of notes in circulation issued upon deposits of interest-bearing bonds of the United States, and the banks are required under the provisions of the act approved June 20, 1874, to pay the expenses incident to the redemption of their notes to the Treasurer of the United States. The banks are also required to pay the expenses of preparing plates from which their circulating notes are printed. The fees allowed to national bank examiners are paid by the banks at rates fixed in accordance with the provisions of section 5240 of the Revised Statutes, as amended by the act approved February 19, 1875. The amount of tax upon circulation and assessments collected during the past year were as follows:

Semi-annual duty on circulation	\$1,216,104.72
Cost of redemption of notes by the United States Treasurer	99,366.52
Assessment for cost of plates, new banks	18,575.00
Assessment for cost of plates, extended banks	7,200.00
Assessment for examiners' fees (sec. 5240, Revised Statutes)	138,969.39
Total	1,480,215.63

The following table is a comparative statement of taxes assessed as semi-annual duty on circulation, cost of redemption of notes, cost of plates, and examiners' fees for the past nine years:

Years.	Semi-annual duty on circulation.	Cost of redemption of notes by the United States Treasurer.	Assessment for cost of plates, new banks.	Assessment for cost of plates, extended banks.	Assessment for examiners' fees (sec. 5240, R. S.).	Total.
1881	\$3,132,006.73	\$147,592.27	\$25,930.00	\$34,129.00	\$94,606.16	\$3,434,365.16
1882	3,024,688.24	160,896.65	18,845.00	1,950.00	99,642.05	3,306,001.94
1883	2,794,584.01	181,857.16	13,150.00	97,800.00	107,781.73	3,195,172.90
1884	2,592,021.35	168,243.35	14,810.00	24,825.00	107,272.87	2,907,172.51
1885	2,044,923.75	138,967.00	18,850.00	1,750.00	110,219.88	2,314,709.63
1886	1,619,127.53	141,141.48	14,100.00	3,000.00	121,777.86	1,897,046.87
1887	1,410,331.84	131,190.67	12,200.00	575.00	130,725.79	1,685,023.30
1888	1,254,829.65	107,843.39	24,175.00	725.00	130,772.71	1,524,355.75
1889	1,216,104.72	99,366.52	18,575.00	7,200.00	138,969.39	1,480,215.63
Total	19,085,606.80	1,277,093.49	160,635.00	172,845.00	1,047,708.40	21,744,003.69

Formerly national banking associations were required to pay a separate tax on both capital and deposits. The act approved March 3, 1883, abated all taxes except that on circulation.

The total tax collected from the national banks up to July 1, 1891, amounted to \$7,855,887.74 on capital, \$60,940,067.16 on deposits, and \$71,339,125.04 on circulation, making a total of \$140,135,079.94.

LOANS.

The following table gives a classification of the loans of the national banks in each of the central reserve cities of New York, Chicago, and St. Louis, in other reserve cities classified in groups, and in the rest of the country at nearly the same dates in each of the last five years:

OCTOBER 5, 1887.

	No. of banks.	On United States bonds on demand.	On other stocks, bonds, etc., on demand.	On single name paper without other security.	All other loans.	Total.
New York.....	47	\$1,445,900	\$95,075,844	\$17,585,496	\$143,908,941	\$258,014,181
Chicago.....	18	500	10,821,735	15,498,986	34,754,972	61,076,193
St. Louis.....	5		1,182,214	279,603	8,920,936	10,382,753
Group No. 1, 4 cities.....	126	56,805	37,717,725	32,464,759	177,884,888	248,124,177
Group No. 2, 4 cities.....	41	60,430	7,710,369	6,111,182	35,568,827	49,450,807
Group No. 3, 4 cities.....	35	48,400	8,087,222	7,887,689	43,232,749	59,256,060
Group No. 4, 4 cities.....	21	7,500	1,117,443	8,213,092	20,827,885	30,165,920
Country.....	2,756	1,418,918	44,335,893	124,035,463	693,790,281	863,575,555
Total.....	3,049	3,033,453	206,048,445	212,070,270	1,158,887,479	1,580,045,647

OCTOBER 4, 1888.

	No. of banks.	On United States bonds on demand.	On other stocks, bonds, etc., on demand.	On single name paper without other security.	All other loans.	Total.
New York.....	46	\$2,132,159	\$108,466,001	\$28,626,295	\$153,271,026	\$292,495,481
Chicago.....	19	359,296	9,631,825	14,155,001	41,129,615	65,275,737
St. Louis.....	4		921,854	306,430	6,988,242	8,216,546
Group No. 1, 4 cities.....	128	148,770	44,271,164	41,430,120	182,567,237	268,417,291
Group No. 2, 4 cities.....	41	10,765	7,806,794	5,182,779	37,435,637	52,435,975
Group No. 3, 4 cities.....	33	75,000	6,670,938	7,200,065	42,188,407	56,093,010
Group No. 4, 4 cities.....	22	1,200	1,205,596	8,501,966	21,303,327	31,012,089
Country.....	2,847	577,484	42,586,172	135,907,639	721,806,861	900,988,156
Total.....	3,140	3,304,674	221,460,344	243,430,915	1,206,690,352	1,674,886,285

SEPTEMBER 30, 1889.

	No. of banks.	On paper with single name, unsecured.	On paper with indorsers, otherwise unsecured.	On demand, with U. S. bonds, other bonds, stocks, or collaterals as security.	On time, with U. S. bonds, other bonds, stocks, or collaterals as security.	Total.
New York.....	45	\$31,866,578	\$119,366,417	\$109,579,495	\$43,085,676	\$303,898,166
Chicago.....	20	15,947,708	31,275,079	12,702,779	12,455,615	72,381,075
St. Louis.....	5	860,000	7,863,955	1,846,621	2,897,770	13,478,346
Group No. 1, 4 cities.....	129	43,237,334	145,457,842	54,280,694	43,847,643	286,823,504
Group No. 2, 4 cities.....	43	8,308,283	29,328,014	9,770,705	12,056,470	59,463,472
Group No. 3, 4 cities.....	33	8,618,618	39,473,645	8,337,056	6,419,197	62,848,516
Group No. 4, 4 cities.....	23	9,051,215	16,140,667	3,432,808	7,061,230	36,285,921
Country.....	2,992	154,475,783	636,484,540	54,314,240	125,279,276	970,553,839
Total.....	3,200	272,372,410	1,025,390,153	254,264,398	253,702,777	1,805,729,739

OCTOBER 2, 1890.

	No. of banks.	On paper with single name, unsecured.	On paper with indorsers, otherwise unsecured.	On demand, with U. S. bonds, other bonds, stocks, or collaterals as security.	On time, with U. S. bonds, other bonds, stocks, or collaterals as security.	Total.
New York.....	47	\$9,044,063	\$122,226,904	\$102,372,932	\$43,466,652	\$297,110,551
Chicago.....	19	16,714,673	27,897,562	17,125,219	16,506,704	78,244,158
St. Louis.....	8	2,172,008	16,274,789	4,346,312	6,081,993	29,475,102
Group No. 1, 5 cities*.....	134	45,604,639	146,363,799	56,562,852	48,664,873	297,216,165
Group No. 2, 4 cities*.....	50	8,683,687	33,311,338	11,092,538	13,140,182	66,137,745
Group No. 3, 6 cities*.....	46	21,118,680	55,649,978	10,540,665	10,752,917	98,062,140
Group No. 4, 4 cities*.....	25	10,116,981	18,602,080	6,225,020	10,313,144	45,257,225
Country.....	3,207	164,665,256	685,600,401	63,538,244	144,715,790	1,058,519,691
Total.....	3,540	298,119,987	1,105,926,851	271,733,682	294,242,167	1,970,022,687

SEPTEMBER 25, 1891.

	No. of banks.	On paper with single name, unsecured.	On paper with one or more indorsers, otherwise unsecured.	On demand with indorsers, otherwise unsecured.	On demand with U. S. bonds, other bonds, stocks, or collaterals as security.	On time, with U. S. bonds, other bonds, stocks, or collaterals as security.	Total.
New York.....	49	\$25,125,313	\$116,957,046	\$2,925,418	\$113,787,196	\$42,783,829	\$301,578,802
Chicago.....	21	17,937,791	34,889,300	3,704,939	13,525,638	17,508,229	87,565,897
St. Louis.....	9	2,093,451	14,617,141	558,571	3,999,711	6,505,233	27,864,107
Group—							
No. 1, 5 cities*†	136	42,118,748	141,021,853	9,015,155	54,233,863	48,397,495	294,787,114
No. 2, 4 cities*..	54	8,457,434	29,991,893	1,084,034	11,149,928	14,393,999	65,077,198
No. 3, 7 cities*†	49	18,898,101	54,569,479	3,361,241	9,923,642	11,684,950	98,279,422
No. 4, 4 cities*..	26	7,498,861	14,190,558	2,106,636	5,596,114	9,954,626	39,296,897
Countries.....	3,333	159,412,548	662,814,133	35,679,262	54,065,103	162,943,757	1,074,914,893
Total.....	7,677	281,453,347	1,068,922,313	58,435,285	266,281,195	314,262,127	1,989,354,240

* Group No. 1, Boston, Albany, Brooklyn, Philadelphia; and Pittsburg. Group No. 2, Baltimore, Washington, New Orleans, and Louisville. Group No. 3, Cincinnati, Cleveland, Detroit, Milwaukee, Des Moines, St. Paul, and Minneapolis. Group No. 4, Kansas City, St. Joseph, Omaha, and San Francisco.

† Brooklyn, St. Paul, and Minneapolis were not reserve cities prior to 1890.

In the table below is given a full classification of the loans in New York City alone for the last six years:

Loans and discounts.	Oct. 7, 1886.	Oct. 5, 1887.	Oct. 4, 1888.	Sept. 30, 1889.	Oct. 2, 1890.
	45 banks.	47 banks.	49 banks.	45 banks.	47 banks.
On indorsed paper.....	\$121,381,380	\$115,310,625	\$117,707,044	\$119,369,404	\$122,226,004
On single-name paper.....	24,646,008	17,585,496	28,626,295	31,866,578	29,044,063
On U. S. bonds on demand.....	2,002,550	1,445,900	2,132,159	1,124,100	583,820
On other stocks, etc., on demand.....	91,636,791	95,075,844	108,466,001	108,258,112	101,789,112
On real estate security.....	211,432	146,885	113,494	201,878	228,778
All other loans.....	13,854,215	28,443,431	35,450,488	43,078,085	43,237,874
Total.....	253,732,376	258,014,181	292,495,481	303,898,166	297,110,551

Loans and discounts.	Sept. 25, 1891.
	49 banks.
On paper with single name, unsecured.....	\$25,125,813
On paper with one or more indorsers, otherwise unsecured.....	116,957,046
On demand with one or more indorsers, otherwise unsecured.....	2,925,418
On demand with U. S. bonds, other bonds, stocks, or collaterals, as security.....	113,787,196
On time with U. S. bonds, other bonds, stocks, or collaterals, as security.....	42,783,829
Total.....	\$301,578,802

The subjoined tables bring forward to the latest date the usual summary of information as to the course of deposits and reserve since the act of June 20, 1874, went into effect. They show the amount of deposits and the state of the reserve at about October 1 of each year, in each central reserve city, in all the reserve cities, and in the States and Territories, with a general summary embracing all active national banks:

NEW YORK CITY.

Date.	No. of banks.	Net deposits.	Reserve required (25 per cent).*	Reserve held.		Classification of reserve.			
				Amount.	Ratio to deposits.	Specie.	Other lawful money.	Due from agents.	Redemption fund.
		Millions.	Millions.	Millions.	Per cent.	Millions.	Millions.	Millions.	Millions.
Oct. 2, 1874	48	204.6	51.2	68.3	33.4	14.4	52.4	.....	1.5
Oct. 1, 1875	48	202.3	50.7	60.5	29.9	5.0	54.4	.....	1.1
Oct. 2, 1876	47	197.9	49.5	60.7	30.7	14.6	45.3	.....	0.8
Oct. 1, 1877	47	174.9	43.7	48.1	27.5	13.0	34.3	.....	0.8
Oct. 1, 1878	47	189.8	47.4	50.0	26.8	13.3	36.5	.....	1.1
Oct. 2, 1879	47	210.2	52.6	53.1	25.3	19.4	32.6	.....	1.1
Oct. 1, 1880	47	268.1	67.0	70.6	26.4	58.7	11.0	.....	0.9
Oct. 1, 1881	48	268.8	67.2	62.5	23.3	50.6	10.9	.....	1.0
Oct. 3, 1882	50	254.0	63.5	64.4	25.4	44.5	18.9	.....	1.0
Oct. 2, 1883	48	266.9	66.7	70.8	26.5	50.3	19.7	.....	0.9
Sept. 30, 1884	44	255.0	63.7	90.8	35.6	63.1	27.0	.....	0.7
Oct. 1, 1885	44	312.9	78.2	115.7	37.0	91.5	23.7	.....	0.5
Oct. 7, 1886	45	282.8	70.7	77.0	27.2	64.1	12.5	.....	0.4
Oct. 5, 1887	47	284.3	71.1	80.1	28.2	63.6	16.1	.....	0.4
Oct. 4, 1888	46	342.2	85.5	96.4	28.2	73.9	22.1	.....	0.3
Sept. 30, 1889	45	338.2	84.5	84.9	25.1	59.1	25.6	.....	0.2
Oct. 2, 1890	47	332.6	83.2	92.5	27.8	78.4	13.9	.....	0.2
Sept. 25, 1891	49	327.8	81.9	86.1	26.3	63.8	32.0	.....	0.3
Average for 18 years ...	47	261.8	65.5	74.1	28.3	46.2	27.2	.....	0.7

CHICAGO.

Oct. 5, 1887	18	64.6	16.2	19.7	30.5	12.9	6.7	.....	0.05
Oct. 5, 1888	19	69.3	17.3	21.0	30.2	13.1	7.8	.....	0.05
Sept. 30, 1889	20	78.7	19.7	25.0	31.7	15.3	9.6	.....	0.05
Oct. 2, 1890	19	82.9	20.7	24.8	30.0	17.0	7.8	.....	0.05
Sept. 25, 1891	21	92.9	23.2	31.2	33.6	20.1	11.0	.....	0.05

ST. LOUIS.

Oct. 5, 1887	5	10.3	2.6	2.7	26.4	1.3	1.3	.....	0.03
Oct. 4, 1888	4	7.9	2.0	2.1	27.0	1.0	1.1	.....	0.02
Sept. 30, 1889	5	12.0	3.0	3.2	26.7	1.0	1.6	.....	0.01
Oct. 2, 1890	8	23.2	6.5	5.6	21.3	3.1	2.5	.....	0.02
Sept. 25, 1891	9	24.2	6.1	5.8	23.8	3.8	2.0	.....	0.02

*All lawful money.

RESERVE CITIES.*

[Reserve 25 per cent, one-half in lawful money.]

Oct. 2, 1874	182	221.4	55.3	76.0	34.3	4.5	36.7	31.1	3.7
Oct. 1, 1875	186	223.9	56.0	74.5	33.3	1.5	37.1	32.3	3.6
Oct. 2, 1876	189	217.0	54.2	73.1	35.1	4.0	37.1	32.0	3.0
Oct. 1, 1877	188	204.1	51.0	67.3	33.0	5.6	34.3	24.4	3.0
Oct. 1, 1878	184	199.9	50.0	71.1	35.6	9.4	29.4	29.1	2.2
Oct. 2, 1879	181	288.8	57.2	81.5	36.5	11.3	33.0	35.7	2.5
Oct. 1, 1880	184	289.4	72.4	105.2	36.2	28.3	25.0	48.2	3.7
Oct. 1, 1881	189	335.4	83.9	100.8	30.0	34.6	21.9	40.6	3.7
Oct. 3, 1882	193	318.8	79.7	89.1	28.0	28.3	24.1	53.2	3.5
Oct. 2, 1883	200	323.9	81.0	100.6	31.1	26.3	30.1	40.8	3.4
Sept. 30, 1884	203	307.9	77.0	99.0	32.2	30.3	33.2	37.3	3.1
Oct. 1, 1885	203	364.5	91.1	122.2	33.5	42.0	34.9	42.4	2.9
Oct. 7, 1886	217	381.5	95.4	114.0	29.9	44.5	26.0	41.3	2.2
Oct. 5, 1887	223	338.5	84.6	100.7	29.7	36.3	23.2	40.0	1.2
Oct. 4, 1888	224	384.9	96.2	116.9	30.4	40.0	24.5	51.5	0.9
Sept. 30, 1889	228	419.0	104.8	121.9	29.1	37.8	26.7	56.7	0.6
Oct. 2, 1890	259	457.8	114.4	129.8	28.3	43.1	24.9	61.0	0.7
Sept. 25, 1891	265	451.9	113.0	138.8	30.7	45.5	31.5	61.0	0.8

*Includes Chicago and St. Louis up to Oct. 5, 1887.

STATES AND TERRITORIES.

Date.	No. of banks.	Net deposits.	Reserve required (15 per cent).*	Reserve held.		Classification of reserve.			
				Amount.	Ratio to deposits.	Specie.	Other lawful money.	Due from agents.	Redemption fund.
		Millions.	Millions.	Millions.	Per cent.	Millions.	Millions.	Millions.	Millions.
Feb. 2, 1874	1,774	293.4	44.0	100.6	34.3	2.7	33.7	52.7	11.9
Oct. 1, 1875	1,851	307.9	46.3	100.1	32.5	1.6	38.7	53.3	11.6
Oct. 2, 1876	1,853	291.7	43.8	99.9	34.3	2.7	31.0	55.4	10.8
Oct. 1, 1877	1,845	290.1	43.6	95.4	32.9	4.2	31.6	48.9	10.7
Oct. 1, 1878	1,822	289.1	43.4	106.1	36.7	8.0	31.1	56.0	11.0
Oct. 2, 1879	1,839	239.9	49.5	124.3	37.7	11.5	30.3	71.3	11.2
Oct. 1, 1880	1,859	410.5	61.6	147.2	35.8	21.2	28.3	86.4	11.3
Oct. 1, 1881	1,895	507.2	76.1	158.3	31.2	27.5	27.1	92.4	11.4
Oct. 3, 1882	2,026	545.8	81.9	150.4	27.5	30.0	30.0	80.1	11.3
Oct. 2, 1883	2,253	577.9	86.7	157.5	27.2	31.2	30.8	84.1	11.3
Sept. 30, 1884	2,417	535.8	80.4	156.3	29.2	35.2	30.9	79.7	10.5
Oct. 1, 1885	2,467	570.8	85.6	177.5	31.1	41.5	29.9	95.9	10.2
Oct. 1, 1886	2,590	637.6	95.6	186.2	29.2	47.8	30.1	90.5	8.7
Oct. 5, 1887	2,756	690.6	103.6	190.9	27.6	50.8	32.6	100.9	6.6
Oct. 4, 1888	2,847	739.2	110.9	208.8	28.4	50.2	34.5	119.0	6.2
Sept. 30, 1889	2,992	807.6	121.1	224.6	27.8	50.5	36.2	132.4	5.5
Oct. 2, 1890	3,207	859.2	128.9	225.5	26.2	54.3	37.7	128.5	5.2
Sept. 25, 1891	3,333	861.8	129.3	235.5	27.3	60.3	36.8	133.0	5.4

* Reserve 15 per cent, two-fifths in lawful money.

SUMMARY.

Oct. 2, 1874	2,004	710.5	150.1	244.9	34.6	21.3	122.8	83.8	17.1
Oct. 1, 1875	2,087	734.1	152.2	295.1	32.0	8.1	125.2	85.6	16.3
Oct. 2, 1876	2,089	706.0	147.5	236.7	33.5	21.3	113.4	87.4	14.6
Oct. 1, 1877	2,089	693.1	138.3	210.8	31.5	22.8	100.2	73.3	14.5
Oct. 1, 1878	2,053	678.8	140.8	228.1	33.6	30.7	97.0	85.1	15.3
Oct. 2, 1879	2,058	708.9	150.3	260.9	33.9	42.2	95.9	107.0	15.8
Oct. 1, 1880	2,090	908.0	201.0	323.0	33.4	108.2	64.3	134.6	15.9
Oct. 1, 1881	2,133	1,111.0	227.2	321.6	28.9	112.7	50.9	133.0	16.1
Oct. 3, 1882	2,259	1,118.0	225.1	303.9	27.2	102.8	72.0	113.3	15.8
Oct. 2, 1883	2,501	1,168.7	234.4	328.9	28.1	107.8	80.6	124.9	15.6
Sept. 30, 1884	2,634	1,038.7	221.1	346.1	31.6	128.6	91.2	112.0	14.3
Oct. 1, 1885	2,714	1,248.2	254.9	415.4	33.3	175.0	88.5	138.3	13.6
Oct. 5, 1886	2,852	1,301.8	261.7	377.2	29.0	156.4	68.7	140.8	11.4
Oct. 5, 1887	3,019	1,388.4	278.0	394.2	28.4	165.1	70.9	140.9	8.3
Oct. 4, 1888	3,140	1,543.6	311.9	446.2	28.9	178.1	90.1	170.5	7.6
Sept. 30, 1889	3,299	1,655.5	333.1	469.6	27.8	164.3	90.7	189.1	6.4
Oct. 2, 1890	3,540	1,758.7	353.7	478.2	27.2	195.9	86.8	189.5	6.1
Sept. 25, 1891	3,677	1,758.6	353.5	497.4	28.3	183.5	113.3	194.0	6.0

In the preceding tables the specie held represents the aggregate of gold and silver coin, Treasurer's certificates, and clearing-house gold certificates. A table will be found in the Appendix,* page 148, showing the amount of each kind of coin and certificates held by the banks in each State and reserve city in October, 1888, September, 1889, October, 1890, and September, 1891.

FAILED BANKS.

Twenty-five national banks, with an aggregate capital of \$3,662,000, were placed in the hands of receivers during the year, as shown in the following statement. In one case creditors have received 55 per cent of the principal, in another 45 per cent, in three cases 20 per cent, and in three cases 15 per cent.

STATEMENT OF FAILED BANKS, THEIR SURPLUS AND LIABILITIES, ACCORDING TO
LAST REPORT OF CONDITION.

Name and location of bank.	Date of authority to commence business.	Date of failure.	Receiver appointed	As shown at date of last report of condition in each case.			
				Capital.	Surplus and undivided profits.	Other liabilities*.	Date of last report of condition.
First National Bank of Alma, Kans.	Aug. 8, 1887	1890. Nov. 10	1890. Nov. 21	\$75,000	4,577	15,409	1890. Oct. 2
First National Bank of Belleville, Kans.	Aug. 28, 1885	Dec. 2	Dec. 12	50,000	6,856	43,240	Oct. 2
First National Bank of Meade Center, Kans.	May 5, 1887	Oct. 17	Dec. 24	50,000	4,009	24,988	Oct. 2
American National Bank of Arkansas City, Kans.	Mar. 15, 1889	Dec. 8	Dec. 26	800,000	29,323	604,001	Oct. 2
City National Bank of Hastings, Nebr.	Dec. 27, 1883	Dec. 27	1891. Jan. 14	100,000	318	123,374	Dec. 17
Peoples' National Bank of Fayetteville, N. C.	June 27, 1872	Dec. 31	Jan. 20	125,000	33,490	130,841	Oct. 2
Spokane Falls National Bank, Wash.	Jan. 24, 1888	Dec. 18	Feb. 3	100,000	81,610	565,593	Oct. 2
First National Bank of Ellsworth, Kans.	Sept. 11, 1884	1891. Jan. 26	Feb. 11	50,000	15,850	136,250	Dec. 19
Second National Bank of McPherson, Kans.	Sept. 16, 1887	Mar. 2	Mar. 25	50,000	10,138	110,248	Dec. 19
Pratt County National Bank of Pratt, Kans.	Sept. 8, 1887	Feb. 26	Apr. 7	50,000	8,065	67,379	Dec. 19
Keystone National Bank of Philadelphia, Pa.	July 30, 1875	Mar. 20	May 9	500,000	120,664	1,856,329	1891. Feb. 26
Spring Garden National Bank of Philadelphia, Pa.	Mar. 13, 1880	May 8	May 21	750,000	171,725	2,007,463	Feb. 26
National City Bank of Marshall, Mich.	July 29, 1872	June 3	June 22	100,000	34,236	76,726	May 4
Red Cloud National Bank of Red Cloud, Nebr.	May 10, 1884	June 26	July 1	75,000	7,316	94,553	May 4
Asbury Park National Bank of Asbury Park, N. J.	Sept. 17, 1887	July 1	July 2	100,000	5,626	44,671	May 4
Ninth National Bank of Dallas, Tex.	Sept. 12, 1890	July 1	July 16	300,000	11,641	267,063	July 9
First National Bank of Red Cloud, Nebr.	Nov. 8, 1882	May 22	July 16	75,000	11,840	76,435	Feb. 26
Central Nebraska National Bank of Broken Bow, Nebr.	Sept. 28, 1888	June 12	July 21	60,000	12,458	97,891	May 4
Florence National Bank of Florence, Ala.	Oct. 3, 1889	June 22	July 23	100,000	5,374	74,466	May 4
First National Bank of Palatka, Fla.	July 15, 1884	July 17	Aug. 7	150,000	27,098	329,640	July 9
First National Bank of Kansas City, Kans.	May 17, 1887	July 16	Aug. 17	150,000	14,374	159,737	May 4
Rio Grande National Bank of Laredo, Tex.	Oct. 28, 1889	Sept. 14	Oct. 3	100,000	6,009	70,233	July 9
First National Bank of Clearfield, Pa.	Jan. 30, 1865	Sept. 29	Oct. 7	100,000	50,192	178,895	July 9
Farley National Bank of Montgomery, Ala.	Dec. 18, 1889	Aug. 21	Oct. 7	100,000	28,118	171,508	July 9
First National Bank of Coldwater, Kans.	May 9, 1887	Sept. 21	Oct. 14	52,000	791	30,592	July 9
Total				3,662,000	651,698	7,360,525	

* Total, as per report, except capital, surplus, circulation, undivided profits, and unpaid dividends.

CAUSES OF FAILURE.

The First National Bank of Meade Center, Kans., closed its doors October 17, 1890, being unable to satisfy demand liabilities presented for payment.

Injudicious loans had been made which were not readily convertible, and a sudden demand for the payment of a county deposit precipitated

suspension. The remote causes of failure were negligence of directors, general stagnation of business, and decrease in values, resulting from continuous failure of crops.

The First National Bank of Alma, Kans., for several months prior to suspension of business had received more than ordinary attention from the national bank examiner, two examinations having been made within a period of six months. The president of the bank was accused of borrowing money on the strength of the bank's indorsement for personal use and investment in private enterprises, and of issuing certificates of deposit in blank sums to be sold under contract by outside parties. Judgments were resting against the president individually, and judgment had been obtained against the bank by a correspondent, the sheriff levying upon the real and personal property. The amount of demand liabilities was very small and voluntary liquidation was contemplated, but an examiner, who visited the bank with special instructions, closed the doors on November 10, 1890, after due examination.

The First National Bank of Belleville, Kans., closed its doors December 2, 1890.

The president was a large borrower, and used the bank for individual purposes. The banking house was destroyed by fire October 28, and from that date deposits gradually diminished, seriously limiting the business of the bank. The president was active in promoting local enterprises, some of which were total failures, and there was no return from investments.

The creditors have been paid 55 per cent on the principal of claims proved.

The American National Bank of Arkansas City, Kans., closed its doors December 8, 1890.

The condition of affairs was complicated. The officers of the bank had used assets to further personal interests, and created large and excessive loans. The immediate cause of suspension was inability to pay a demand certificate of deposit. There was an unwarranted extension of business in attempting to sustain enterprises in which the officers were interested, and large sums of money were borrowed upon certificates of deposit at high rates of interest. Dividends were paid to shareholders not justified by the earnings of the bank, and the directors were guilty of gross inattention to duty, disregard of the law and advice from the Comptroller.

Dividends have been paid amounting to 20 per cent on the principal of claims proved, and the assets may prove to be sufficient for payment in full.

The Spokane National Bank of Spokane Falls, Wash., closed its doors December 18, 1890.

The entire management of affairs was committed to the cashier and the vice-president, who were the moving spirits in speculative enterprises, which were carried on without interference or control by the directors, the latter never giving the bank any attention, but lending their names in support of the reckless operations of the cashier. About one-half of the deposits were locked up in private banks and mining interests. This condition of affairs made it impossible for the bank to meet its demand obligations, and was the immediate cause of suspension.

A dividend of 15 per cent has been paid to creditors on the principal of claims proved.

The City National Bank of Hastings, Nebr., closed its doors December 27, 1890.

On October 17 an assessment upon the shareholders, amounting to

50 per cent of the capital stock, was levied by the Comptroller, and remained unpaid. The examiner upon taking charge discovered the fact that more than one-half of an increase of capital certified to the Comptroller as having been paid in, and authorized by him in accordance with law, was represented by the notes of subscribers, the obligations remaining unpaid at date of suspension.

Notes had been rediscounted for persons to whom the president had transferred real estate at fictitious values. High rates of interest were paid on certificates of deposit and bills payable to non-resident capitalists for several years prior to the suspension, and dividends not earned were declared and paid to shareholders. The board of directors was inattentive to duty, which made reckless mismanagement possible.

A dividend of 15 per cent has been paid to creditors on the principal of claims proved.

The People's National Bank of Fayetteville, N. C., closed its doors December 31, 1890, the immediate cause being a slight run by depositors. The condition of affairs, as reported by the examiner upon taking charge, showed gross irregularities by the president and criminal violation of law. As a critical examination progressed, it was found that the bank had been practically insolvent for many years, the Comptroller and the examiners having been deceived through systematic and successful attempts to carry among the assets a large amount of notes and bills as alive and secured which were in fact past due and worthless.

The president was permitted to abstract funds of the bank upon the indorsement of notes taken by him in connection with an outside enterprise, and which were represented as being secured by chattel mortgage. Fictitious drafts were drawn and carried by the bank as bills of exchange. The president was thoroughly dishonest; but, because the directors and other officers either did not know their duties or utterly failed to perform them, he was enabled to completely wreck the bank.

All the facts were promptly reported to the United States district attorney. The president was arrested, but the grand jury failed to find an indictment.

A dividend of 20 per cent has been paid to creditors on the principal of claims proved.

The First National Bank of Ellsworth, Kans., closed its doors January 26, 1891. Suspension was inevitable as the result of injudicious and reckless loans to the cashier and his friends, the funds being used and lost in speculation. A dividend of 15 per cent has been paid to creditors on the principal of claims proved.

The Pratt County National Bank, of Pratt, Kans., closed its doors February 26, 1891. The president was a large borrower and a wild speculator. The bank was compelled to take mortgages to secure his indebtedness, which were not valuable as live assets, the aggregate amount representing more than one-half of the capital of the bank. The bank also suffered large losses in the earlier period of its existence, but the management undertook to conduct a successful business by borrowing on bills payable and bills receivable and paying excessive rates of interest on deposits. Upon sudden demand for the payment of the deposit of the county treasurer, the bank was forced to suspend.

A dividend of 20 per cent has been paid to creditors on the principal of claims proved.

The Second National Bank of McPherson, Kans., closed its doors March 2, 1891. The failure of this bank was due to the reckless man-

agement of its president, who squandered the assets. When the bank suspended he committed suicide.

The Keystone National Bank of Philadelphia, Pa., was closed to business on the morning of March 20, 1891, by order of the Comptroller of the Currency, the examiner immediately taking charge.

An assessment upon the shareholders had been previously levied to make good an impairment of the capital, as such impairment was then estimated. The assessment was not responded to by the shareholders, and upon disclosures made by the president of the bank in person to the Comptroller, on the evening of March 19, immediate action was taken and the bank was closed. According to the records of the bank as then disclosed, the capital had not been entirely lost, but subsequent investigation developed the fact that collusion among the officers and employes had resulted in successfully deceiving the examiner and the Comptroller with respect to the true condition of the bank.

The causes of the failure were reckless and criminal use of funds belonging to the bank, the bookkeeper having aided the president, who is a fugitive from justice, in deceiving the examiner by false entries, such entries being made at or about the dates of examination. This bookkeeper, after the suspension, admitted his guilt and was arrested, brought to trial, and sentenced to imprisonment for a term of seven years. Subsequently three other persons connected with the bank were arrested upon information and are now held under bail for collusion.

A thorough investigation has progressed since the date of suspension, for the purpose of ascertaining all the facts and fixing personal liability. The city treasurer of Philadelphia appeared to be a large creditor, and permission was granted State and city authorities to investigate the records of the bank for the purpose of ascertaining the precise facts.

The Treasury Department also instituted an investigation of all the records of the bank, with the view of ascertaining who is liable, criminally or otherwise, for the failure, which is still in progress.

The Spring Garden National Bank of Philadelphia, Pa., closed its doors on the morning of May 8, 1891, being unable to settle with the clearing house. This suspension closely followed that of the Keystone National Bank, and as investigation proceeded it became evident that there had been criminal violations of law. On May 28 the president and cashier were arrested upon information and brought to trial. They were found guilty and relegated to the penitentiary for a term of ten years each.

The First National Bank of Red Cloud, Nebr., was closed by the examiner May 22, 1891, payment of a certificate of deposit having been refused, and in obedience to telegraphic instructions from the Comptroller. Upon investigation it was discovered that the bank had been in an insolvent condition for a considerable period of time, such condition having been caused by irregularities of former officers and general mismanagement. No meeting of the shareholders had apparently been held for more than two years, and the officers and employes immediately in charge were permitted to conduct its affairs. The funds of the bank were largely loaned to its officers and their relatives, the loans not being properly secured.

The National City Bank of Marshall, Mich., closed its doors June 3, 1891. On June 2 the Comptroller was advised that the assistant cashier had embezzled a large sum of money, but that the bondsmen were able and willing to make good the entire loss without delay.

The cashier was very inattentive to duty, and the directors, having unbounded confidence in the integrity of the employes, grossly neglected the interests of the bank. As investigation proceeded the embezzlement was found to equal the entire capital stock. On May 27 the examiner discovered the defalcation and informed the directors, but as the bank was still considered solvent, no action was taken to secure arrest, and the embezzler escaped before the doors were closed and the examiner took charge.

A dividend of 50 per cent has been paid to creditors upon the principal of claims proved.

The Red Cloud National Bank of Red Cloud, Nebr., was closed by order of the Comptroller June 26, 1891. All of its capital was represented by unconvertible securities, and the funds of the bank had been invested in local enterprises, at great loss.

The condition of the bank was due to bad management and a total disregard of sound banking principles.

The Asbury Park National Bank of Asbury Park, N. J., was closed by order of the Comptroller July 1, 1891. During the period of the bank's existence a sufficient amount of individual deposits were not obtained to make a profitable business. A large and costly building was constructed, and as an asset was not consistent with the volume of business. The president borrowed large sums, bad loans were made, and excessive interest was paid. Expenditures and losses were in excess of earnings, the directors were negligent of duty, and false statements of condition were made. The public and correspondent banks lost confidence and suspension became inevitable.

The Central Nebraska National Bank of Broken Bow, Nebr., was closed by the examiner on the morning of June 12, 1891, upon receipt of instructions from the Comptroller. The immediate and remote causes for this action were the heavy loans made to individual directors, aggregating three-fifths of the capital of the bank, and the heavy loss sustained upon bills receivable, which had been foisted upon the bank through questionable methods adopted by the officers in endeavoring to aid outside enterprises wholly foreign to the locality. Large sums of money were borrowed at high rates of interest, for which nearly all of the good paper of the bank had been pledged as security.

The Florence National Bank of Florence, Ala., closed its doors June 22, 1891, the entire capital having been lost. The former president had absolute control, improperly used the funds of the bank to sustain outside enterprises, and was forced to resign; but his management had placed the bank in a position from which it could not recover. The suspension of the bank was precipitated by the protest of drafts aggregating an inconsiderable amount drawn upon a correspondent bank.

The Ninth National Bank of Dallas, Tex., was closed by the examiner July 1, 1891, upon receipt of telegraphic instructions from the Comptroller. The bank commenced business in September, 1890, and was controlled by the cashier, who had previously become indebted for a large amount to another national bank, of which he was an officer, and funds of the Ninth National Bank were used to liquidate his indebtedness. The directors held meetings only on call, and were not attentive to duty. A large proportion of the loans were made to irresponsible parties without sufficient security, and the proceeds were subrogated to the uses of the cashier. A new management was effected, but the capital had become so impaired that suspension was inevitable. After the examiner took charge an attempt was made to control sufficient funds

for the payment of creditors in full, so that the bank might be placed in voluntary liquidation, but the effort did not succeed. From the records it would appear that the failure was almost entirely due to the wild speculations and dishonest practices of the cashier.

The First National Bank of Kansas City, Kans., closed its doors July 16, 1891, upon demand for the payment of the city deposit. A former president, in conjunction with the vice-president, were active speculators in real estate and the promoters of outside enterprises. These officers, and other real estate dealers, became indebted to the bank for large sums, and when a reaction from abnormally high prices resulting from a so-called "boom" occurred, were unable to meet their obligations or secure them with convertible collaterals. Settlements were forced upon the bank by transfers of real estate, to such an extent that the assets were tainted with a doubtful or worthless character. The credit of the bank having become impaired, confidence was destroyed, and stringency in the money market caused a withdrawal of deposits. The bank was unable to borrow from correspondents, not being able to pledge sufficient security, and finally could not meet demand obligations.

The First National Bank of Palatka, Fla., closed its doors July 17, 1891. The president was connected with a city banking institution which failed. Public confidence was destroyed, which resulted in a considerable withdrawal of deposits. A large amount of stock, bonds, and real estate mortgages were among the assets, which at date of suspension represented a large loss. Serious depreciation of values and stagnation of business were general in the locality. Formerly, the management having been left entirely to the president, loans and investments were made in outside enterprises, dependent wholly upon the duration of exceptional local prosperity. The president and his relatives were large borrowers, and invested the funds in sustaining local schemes. Finally the bank was unable to borrow from correspondents, or rediscount paper, and could not meet demand obligations.

The Farley National Bank of Montgomery, Ala., closed its doors August 21, 1891. The immediate cause of the suspension was the protest of drafts, aggregating in amount a sum greater than the capital of the bank, which had been cashed in the interests of a railroad company, collateral security being held, but not readily convertible. Efforts are being made to realize upon the security, so that the bank may resume business.

The Rio Grande National Bank of Laredo, Tex., was closed by examiner upon receipt of instructions from the Comptroller September 14, 1891. The principal cause of failure was the use of the bank's funds in sustaining an improvement company which owned a large area of land in the locality. The bank was doing no business, its capital was seriously impaired, and its resources locked up in unconvertible securities. The depositors were few; the aggregate amount due was insignificant, and there was no money in the bank to loan.

The First National Bank of Coldwater, Kans., was closed by a national bank examiner, upon receipt of instructions from the Comptroller, September 21, 1891. An assessment upon the capital had been made, but the shareholders did not respond. Former officers of the bank were reckless speculators in real estate, and failed, owing the bank large amounts. Their successors were large borrowers for similar purposes. The general causes which resulted in suspension were bad and careless management and indifference to duty on the part of the directors, who left the management *entirely in the hands of the cashier*. A movement

to raise sufficient funds to pay creditors in full, so that the bank might be placed in voluntary liquidation, was abandoned.

The First National Bank of Clearfield, Pa., closed its doors September 29, 1891. The entire capital had been lost. The management of the bank rested wholly with the president, who had large interests in outside enterprises and a State bank, using the national bank for individual purposes. Excessive loans were made in sustaining outside deals. Good assets were systematically abstracted, and worthless assets substituted. Loans not represented by the obligations of firms and companies in some form or other, in which the president was interested, were based upon accommodation paper. Large loans were floated, represented by paper made by persons and firms of doubtful character. The bank acquired control of a mill property, which locked up large sums of money in the purchase and operation, and was a losing investment. The directors were either negligent or guilty of collusion. The irregularities already discovered strongly indicate fraudulent and gross violations of law. The president was promptly arrested and held for trial.

The Washington National Bank of New York City was organized June 5, 1890, with a capital of \$300,000. Injudicious loans were made, and the capital became seriously impaired. The doors were closed to business March 24, 1891, but the assets being sufficient to pay all liabilities, the bank was permitted to go into voluntary liquidation.

The Newton National Bank of Newton, Kans., closed its doors November 20, 1890. A few months prior to this date an increase of capital stock had been approved by the Comptroller, the affairs of the bank, according to reports, being in good condition. A considerable number of shares of stock were owned by non-residents, who regarded the investment as secure without inquiry as to the conduct of the bank with respect to its management.

After suspension the fact was developed that most of the increase had been collected prior to authorization by the Comptroller, and was represented substantially by loans made to a bank in Guthrie, Okla., which had failed. The cashier of this bank was the cashier of the Newton National Bank and co-manager. The management of the Newton National Bank practically rested with the vice-president and cashier.

Only one-third of the capital stock was held by local shareholders, so that unusual facilities were afforded these officers for using the funds of the bank uncontrolled, as they owned about two-thirds of the stock locally held. The officers borrowed largely from the bank, and pledged a majority of the good bills as collateral security for rediscounts. The Eastern shareholders were prompt in taking steps looking to a repairment of the capital, and their efforts resulted in a deposit of sufficient fresh capital in cash to place the bank upon a solvent footing. The receiver was withdrawn, and the bank was permitted to resume business July 1, 1891.

The Farmers and Merchants' National Bank of Clarksville, Tenn., closed its doors December 10, 1890, on account of the embarrassment created by the failure of a private bank and firms indebted to it in large sums. Reports indicated that the embarrassment was temporary, and immediate steps were taken by the shareholders to repair the capital, so that, if permitted, the bank might resume business. Their efforts were successful, a voluntary assessment was levied and paid, bad debts were charged off, and as a result there became available funds sufficient to pay all liabilities, leaving the capital intact. The bank was permitted to resume business April 20, 1891.

The affairs of three national banks have been closed during the past year and final dividends have been paid to their creditors.

Name and location of bank.	Date of appointment of receiver.	Total dividends on principal.	Proportion of interest paid.
		<i>Per cent.</i>	<i>Per cent.</i>
State National Bank, Raleigh, N. C.....	Mar. 31, 1888	53	.....
National Bank of Sumter, S. C.....	Aug. 24, 1887	100	100
Lancaster National Bank, Clinton, Mass.....	Jan. 20, 1886	100	100

Out of 4,648 national banks organized since February, 1863, only 164, or about 3.53 per cent, have been placed in the hands of receivers; this includes 9 which had been previously placed in liquidation by the shareholders, but upon their failing to pay depositors the Comptroller appointed receivers to wind up their affairs. Of the 164 failed banks, 35 have paid creditors in full, principal and interest, 6 have paid principal and a part of the interest, and 12 have paid the principal only. The affairs of 102 of the 164 banks have been finally closed, leaving 62 in process of settlement, of which 15 are virtually closed, with the exception of pending litigation, leaving 47 receiverships in active operation.

The total amount so far paid to creditors of insolvent national banks has been \$38,629,123, upon proved claims amounting to \$57,792,028. The amount paid during the year has been \$1,725,883, besides \$15,903 paid for dividends declared prior to November 1, 1890, on claims proved since that date. Assessments amounting to \$15,173,050 have been made upon shareholders of insolvent national banks under section 5151 of the Revised Statutes of the United States. From this source the gross collections amount to \$6,621,409, of which there has been received during the past year \$257,734. Suits are pending in some cases.

In the Appendix, * page 208, a table will be found showing, under various heads, amounts collected from the assets of each of the 164 insolvent national banks, the amounts disbursed, and the purpose. All moneys and assets are accounted for, and the figures supply all information necessary to the ascertainment of percentages and loss.

DIVIDENDS, THIRTY-EIGHT IN NUMBER, PAID TO THE CREDITORS OF INSOLVENT NATIONAL BANKS DURING THE PAST YEAR, WITH THE TOTAL DIVIDENDS IN EACH CASE UP TO NOVEMBER 1, 1891.

Name and location of bank.	Date of appointment of receiver.	Dividends paid during the year.			Total dividends paid depositors.	Proportion of interest paid depositors.
		Date.	Amount.	Per cent.		
Gloucester City National Bank of Gloucester City, N. J.....	June 12, 1890	Nov. 6, 1890	\$5,493.06	20	<i>Per cent.</i>	<i>Per cent.</i>
Do.....		Oct. 29, 1891	5,913.81	20	20	.....
Third National Bank of Malone, N. Y.....	Dec. 30, 1889	Nov. 12, 1890	11,614.79	20	40	.....
Lancaster National Bank of Clinton, Mass.....	Jan. 20, 1886	Nov. 20, 1890	16,000.74	0.83	80	.....
First National Bank of Corry, Pa.....	Oct. 11, 1887	Dec. 15, 1890	8,700.52	5	100	100
Pacific National Bank of Boston, Mass.....	May 22, 1882	Dec. 26, 1890	47,942.51	2	90	.....
State National Bank of Wellington, Kas.....	Sept. 25, 1890	Dec. 31, 1890	11,029.39	25	61	.....
Do.....		Apr. 23, 1891	12,408.41	25	25	.....
Do.....		June 30, 1891	14,127.54	25	75	.....
California National Bank of San Francisco, Cal.....	Jan. 14, 1889	Oct. 7, 1891	25,345.09	5.55	100	100

DIVIDENDS, THIRTY-EIGHT IN NUMBER, ETC.—Continued.

Name and location of bank.	Date of appointment of receiver.	Dividends paid during the year.			Total dividends paid depositors.	Proportion of interest paid depositors.
		Date.	Amount.	Per cent.		
State National Bank of Raleigh, N. C.	Mar. 31, 1888	Jan. 12, 1891	\$0, 780.48	3	Per cent. 53	Per cent.
Harper National Bank of Harper, Kans.	Feb. 10, 1890	Feb. 3, 1891	3, 766.22	20	20	.....
Do .....	.....	Apr. 25, 1891	7, 532.44	40	60	.....
Park National Bank of Chicago, Ill.	July 14, 1890	Feb. 4, 1891	91, 793.32	20	80	.....
Do .....	.....	Sept. 22, 1891	46, 219.26	10	90	.....
First National Bank of Abilene, Kans.	Jan. 21, 1890	Feb. 6, 1891	7, 626.09	15	15	.....
Do .....	.....	Mar. 5, 1891	7, 626.05	15	30	.....
Do .....	.....	Apr. 23, 1891	24, 451.41	40	70	.....
First National Bank of Belleville, Kans.	Dec. 12, 1890	Feb. 13, 1891	3, 998.70	25	25	.....
Do .....	.....	Mar. 21, 1891	5, 069.32	20	45	.....
Do .....	.....	Sept. 30, 1891	3, 051.58	10	55	.....
Kingman National Bank of Kingman, Kans.	Oct. 2, 1890	Mar. 17, 1891	9, 312.93	20	20	.....
Do .....	.....	May 20, 1891	13, 969.52	30	50	.....
Do .....	.....	July 28, 1891	23, 090.76	12.50	62.50	.....
First National Bank of Anoka, Minn.	Apr. 22, 1889	Mar. 20, 1891	37, 596.11	35	65	.....
Exchange National Bank of Norfolk, Va.	Apr. 9, 1885	Apr. 15, 1891	86, 766.69	3	63	.....
First National Bank of Sheffield, Ala.	Dec. 23, 1889	Apr. 15, 1891	9, 161.04	15	15	.....
Fifth National Bank of St. Louis, Mo.	Nov. 15, 1887	Apr. 15, 1891	33, 890.99	3	96	.....
First National Bank of Ellsworth, Kans.	Feb. 11, 1891	Apr. 29, 1891	12, 104.06	15	15	.....
People's National Bank of Fayetteville, N. C.	Jan. 20, 1891	May 14, 1891	18, 349.01	20	20	.....
First National Bank of Monmouth, Ill.	Apr. 22, 1884	July 1, 1891	29, 649.22	12.73	100	100
Marine National Bank of the City of New York, N. Y.	May 13, 1884	July 20, 1891	673, 932.20	15	80	.....
Pratt County National Bank of Pratt, Kans.	Apr. 7, 1891	....do	5, 873.94	20	20	.....
City National Bank of Hastings, Nebr.	Jan. 14, 1891	July 24, 1891	14, 710.63	15	15	.....
American National Bank of Arkansas City, Kans.	Dec. 26, 1890	July 28, 1891	33, 350.56	20	20	.....
Fidelity National Bank of Cincinnati, Ohio.	June 27, 1887	Aug. 5, 1891	216, 233.69	5	50	.....
Spokane National Bank of Spokane Falls, Wash.	Feb. 3, 1891	Sept. 30, 1891	42, 568.25	15	15	.....
National City Bank of Marshall, Mich.	June 22, 1891	....do	77, 510.63	50	50	.....
Total .....	.....	.....	1, 709, 980.96	.....	.....	.....

INACTIVE RECEIVERSHIPS.

Fifteen banks remain in the hands of receivers, the affairs of which are practically wound up, and the trusts are kept on the inactive list because of pending litigation or of the possession of assets, an immediate disposition of which would entail unnecessary sacrifice. The expenses of a trust in this condition are nominal and limited to what is actually necessary to proper and careful attention to the matters in abeyance. Titles to property pass through a receiver and the courts, but final dividends are sometimes paid from the office of the Comptroller, especially in the event of a considerable lapse of time after a receiver has realized upon all available assets.

By comparison with the report of 1890 it will be observed that only one of the banks then reported on the inactive list has been stricken out. It is expected that the unsettled affairs of most of those in the list will be disposed of within the next year and the receiverships formally terminated.

The following is a list of receiverships in an inactive condition:

Name and location of bank.	Date of appointment of receiver.	Dividends paid.	Per cent.
First National Bank, Albion, N. Y.	Aug. 26, 1884		28.50
First National Bank, Anderson, Ind.	Nov. 23, 1873		39.50
Third National Bank, Chicago, Ill.	Nov. 24, 1877	*100	
Central National Bank, Chicago, Ill.	Dec. 1, 1877		60
First National Bank of Union Mills, Union City, Pa.	Mar. 24, 1883		70
German-American National Bank, Washington, D. C.	Nov. 1, 1878		50
First National Bank, Monmouth, Ill.	Apr. 22, 1884		*100
Mechanics' National Bank, Newark, N. J.	Nov. 2, 1881		67.405
First National Bank, Livingston, Mont.	Aug. 25, 1884		95
First National Bank, Pine Bluff, Ark.	Nov. 20, 1886		45
First National Bank, Buffalo, N. Y.	Apr. 22, 1882		43.50
First National Bank, Leadville, Colo.	Jan. 24, 1884		40
First National Bank, St. Albans, Vt.	Apr. 22, 1884		25
First National Bank, Sioux Falls, S. Dak.	Mar. 11, 1886		40
Fifth National Bank, St. Louis, Mo.	Nov. 15, 1887		96

* And interest. Meeting of shareholders called.

The total number of national banks organized since February 25, 1863, is 4,648, of which 3,694 are now in operation, 954 having passed out of the system, accounted for as follows:

Passed into voluntary liquidation to wind up their affairs.	629
Less number afterward placed in the hands of receivers.	9
	620
Passed into liquidation for purpose of reorganization.	80
Passed into liquidation upon expiration of corporate existence.	*91
Placed in hands of receivers.	164
	955
Less restored to solvency and resumed business.	1
Total passed out of system.	954

BANKS IN VOLUNTARY LIQUIDATION.

National banks complying with United States statutes are permitted to go into voluntary liquidation, and in some instances, when affairs have been partially closed, the Comptroller has been requested to permit resumption of business, the same title and charter number being retained. The reasons for such requests are generally based upon an unexpected appreciation in the value of assets, a desire to avoid sacrifices seemingly unnecessary, a change of management found to be important, and a desire to retain the title for its business value.

The Supreme Court of the United States has held that a national bank in voluntary liquidation is not dissolved as a corporation, and may bring suit or defend for the purpose of winding up its business (*Bank vs. Insurance Company*, 104 U. S., 54), and section 7 of the act approved July 12, 1882, provides:

That national banking associations whose corporate existence has expired or shall hereafter expire, and which do not avail themselves of the provisions of this act, shall be required to comply with the provisions of sections 5221 and 5222 of the Revised Statutes in the same manner as if the shareholders had voted to go into liquidation, as provided in section 5220 of the Revised Statutes; and the provisions of sections 5224 and 5225 of the Revised Statutes shall also be applicable to such associations, except as modified by this act; and the franchise of such associations is hereby extended for the sole purpose of liquidating their affairs until such affairs are finally closed.

*Forty-four of these have been reorganized.

It has been held by the courts that under act of Congress approved July 12, 1882, extending for the purpose of liquidation the franchises of such national banking associations as do not request an extension of their corporate existence, and making applicable to them the statutes relating to the liquidation of similar banking associations, the shareholders may continue to elect officers and directors for the purpose of effecting liquidation. In the case referred to, the court held that the right to elect directors and such other officers as are usually chosen by a business corporation is a part of the corporate franchise, and that when the franchise is extended, although for a limited purpose, the corporation may exercise all the powers originally conferred upon it which are appropriate for that purpose, among which is the election of directors, the right to manage its own affairs belonging to the bank through the shareholders, and not to those who by accident are found to be directors in possession.

In 1868 the question arose as to whether the Comptroller of the Currency had authority to permit a national bank in voluntary liquidation to resume all its corporate powers, the request having been made by a bank which had been permitted to go into voluntary liquidation, the shareholders having rescinded a former resolution, and requesting leave to withdraw notice to the Comptroller of a desire to liquidate the affairs of the bank. The matter was referred to the Department of Justice, and the opinion was rendered that resumption of business under such circumstances would involve too many grave consequences to admit of the supposition that such an event was contemplated by Congress, or that it was consistent with the law.

It has been strongly urged, however, that inasmuch as the association does not lose its corporate entity prior to a disposition of the last remaining asset, title and charter number having been preserved, and the association having been inactive as to new business only, retroactive action by shareholders owning two-thirds of the stock, relative to resumption of business, should be equally potential with the original resolution as to voluntary liquidation, inasmuch as the Comptroller is not inhibited by the law from taking cognizance of such action.

By reference to the statute above quoted it will be seen that associations which do not avail themselves of the provisions of the act for extension of corporate existence are required to comply with the provisions applicable to associations in voluntary liquidation consequent upon the action of shareholders, and that the franchises of the class first mentioned are extended for the *sole* purpose of liquidation. It seems improbable that Congress intended to make a distinction between associations in liquidation by reason of the action or non-action of shareholders, although in the first instance the language of the statute is that the association may be closed, and in the other it is more clearly indicated that the association is to be closed.

Even if it could be conclusively shown that the Comptroller can legally permit a bank in voluntary liquidation to resume business, there would be insuperable objections to the exercise of such authority, arising out of a consideration of those principles which underlie a sound public policy with respect to the security of the depositors and creditors of national banks under existing law. Whenever depositors and creditors are paid in full, shareholders are released from the stock liability prescribed by section 5151 of the Revised Statutes; and, if the association should be resuscitated, by what process could this liability be reassumed or enforced? Furthermore, the convertible assets having been realized to liquidate indebtedness, the doubtful alone remain

to represent the interests of shareholders, and as constituting a part of the capital would be a constant menace to the welfare of the association.

DIRECTORS.

All the powers of a national banking association are exercised through its board of directors. As a general rule it may be said that associations will prosper just in proportion as their directors are intelligent and faithful. The details of the business must of course be in charge of its officers, and the duty of selecting these is one of the greatest responsibilities devolved upon the board, for unless the active managers are skillful, honest, and attentive the affairs of the association can not prosper.

With the selection of a proper corps of officers the duties of the directors are well begun, but this is far from constituting all that is required of them.

A recent decision of the Supreme Court of the United States has attracted attention to the fact that the duties and responsibilities of directors of national banks are now ill defined. Without any purpose to enter into a discussion of the decision in the case mentioned (*Briggs vs. Spaulding, et al*), the Comptroller desires to say that legislation should make these duties so clear and unequivocal that no person of intelligence could plead ignorance of the requirements of the position.

National banks deriving their franchises from the General Government have in the past been conducted with conspicuous fidelity and have afforded unexampled security to those who have made them the depository of their funds. While these facts are well known to all who have access to statistics upon the subject, there is still room for progress in the direction of security. No matter what safeguards are provided their enforcement must necessarily be committed to human agencies, and these are often unskillful and occasionally corrupt.

Experience shows that governmental supervision of national banks has been in the past of very great service in promoting safe and conservative banking, although its value is neither fully understood nor appreciated. Upon the directors, however, properly rests the responsibility of management, and any plan which contemplates relieving them in this respect is false in principle and will be found vicious in practice. Neither can they be safely permitted to delegate their powers and responsibilities to others, nor neglect them with impunity. If the provisions of existing law permit directors of national banks to escape liability for losses resulting from transactions forbidden by the national bank act by pleading ignorance of such transactions, while such ignorance is the result of neglect of the affairs of the associations committed to their charge, it will be useless to expect in the future any better results than have been experienced in the past. As a matter of fact the greatest difficulty experienced by the Comptroller in promoting the successful management of the associations coming under his supervision has resulted from his inability to inspire the directors of national banks with a proper realization of the duties which they owe to the shareholders whom they have consented to serve and the creditors whom they have engaged to protect. The greatest obstacles to be overcome are neglect and inattention. In far too many associations boards of directors never meet except upon the occasions when dividends are to be declared, and even this is sometimes unlawfully attempted without necessary action upon their part.

In other cases there is a disposition exhibited by directors to monopolize the loans and discounts of the bank, thus converting to their own use the funds of others entrusted to their keeping, thereby exposing the bank to losses by reason of want of proper distribution of its loans and subjecting to inconvenience those customers of the bank who are not favored with a place at the directors' table. Such inattention and selfishness are too often the characteristics of bank directors and are productive of serious consequences, but when accompanied, as they sometimes are, by lack of integrity the most direful results are realized.

In relation to no matter connected with the conduct of national banks is legislation more imperatively demanded than in making plain the duties of those who accept the position of directors.

If to absent themselves from the bank and from the meetings of the board affords safe grounds of defense when it is sought to hold them accountable for losses which their presence and reasonable oversight would have prevented, then the public have been grossly deceived as to the measure of duty which shareholders and creditors may properly demand of officers to whom such important trusts have been committed. If the board of directors may safely neglect everything connected with the conduct of a bank except the election of officers and the declaration of dividends, then the law is greatly at fault. Such a complete abdication of powers ought not to go unrebuked and unpunished. All other safeguards will prove of little value if the chosen and only representatives of the shareholders may lawfully refuse and neglect to give the interests committed to their care such attention and supervision as successful proprietorship has at all times demanded.

LEGAL DECISIONS.

A digest of the most prominent national-bank cases will be found in the Appendix,* page 91, decisions by the courts having been added from year to year. This digest is intended to furnish the management of national banks with a convenient source of reference and to accommodate the general public, much correspondence with the office being thus avoided which would otherwise be necessary.

A very important case was decided by the Supreme Court of the United States during the last term affecting the liability of directors of national banks with respect to negligence and inattention to duty.

TRANSACTIONS OF THE NEW YORK AND OTHER CLEARING-HOUSE ASSOCIATIONS.

The present membership of the New York Clearing-House Association comprises 45 national banks, 18 State banks, and the subtreasury at New York; sixty-four members in all. There are 50 national and 44 State banks in New York City, and 5 national and 26 State banks not being members, clear through other banks which are members of the association.

The following information with respect to the operations of the clearing-house associations in the United States has been kindly furnished, upon request, by Mr. W. A. Camp, manager of the Clearing-House Association at New York City:

REPORT OF THE SECRETARY OF THE TREASURY.

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COMPARATIVE STATEMENT FOR TWO YEARS OF THE TRANSACTIONS OF THE NEW YORK CLEARING-HOUSE, SHOWING AGGREGATE AMOUNT OF CLEARINGS, AGGREGATE BALANCES, AND THE KINDS AND AMOUNTS OF MONEY PASSING IN SETTLEMENT OF THESE BALANCES.

Terminated—	Aggregate clearings.	Aggregate balances.	Kinds of money and amount of each kind.					Percentages to balances.	
			U. S. gold certificates.	U. S. Treasury notes.	Treasury certificates for legal tenders, sec. 5193, U. S. Revised Statutes.	Legal tenders and minor coin.	Gold certificates.	Legal tenders.	
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.			
Oct. 1, 1890.	37,690,686,572	1,753,040,145	1,735,316,000	*6,914,000	4,995,000	5,615,145	90.0	1.0	+
Oct. 1, 1891.	34,653,698,770	1,584,635,500	1,028,443,000	102,435,000	1353,510,000	190,247,500	64.9	35.1	—
Increase.....	3,036,987,802	168,404,645	706,873,000	95,521,000	1348,515,000	94,432,355			
Decrease.....									

* The so-called United States Treasury notes are issued in pursuance of the provisions of the act of Congress directing the purchase of silver bullion and the issue of Treasury notes thereon, approved July 14, 1890. They are payable on demand in coin.

† Includes \$27,030,000 clearing-house loan certificates of 1890.

The following is a comparative statement of transactions of the New York Clearing House for thirty-eight years, and shows for each year the number of banks, aggregate capital, clearings and balances, average of the daily clearings and balances, and the percentage of balances to clearings:

Year.	No. of banks.	Capital.*	Clearings.	Balances paid in money.	Average daily clearings.	Average daily balances paid in money.	Balances to clearings.
							Per ct.
1854.....	50	\$47,044,906	\$5,750,455,987	\$297,411,494	\$19,104,505	\$988,078	5.2
1855.....	48	48,884,180	5,302,912,098	289,094,137	17,412,052	940,565	5.4
1856.....	50	52,883,700	6,906,213,328	334,714,489	22,278,108	1,079,724	4.8
1857.....	50	64,430,200	8,333,226,718	365,313,902	26,968,371	1,182,246	4.4
1858.....	46	67,146,018	4,756,664,386	314,238,911	15,393,796	1,016,954	6.6
1859.....	47	67,921,714	6,448,005,956	303,984,693	20,867,538	1,177,944	5.6
1860.....	50	69,907,435	7,231,143,057	380,693,458	23,401,757	1,232,018	5.3
1861.....	50	68,900,605	5,915,742,753	353,383,944	19,269,520	1,151,088	6.0
1862.....	50	68,375,820	6,871,443,591	415,530,331	22,237,682	1,344,758	6.0
1863.....	50	68,972,508	14,867,597,849	677,626,483	48,428,657	2,207,252	4.6
1864.....	49	68,585,763	24,097,196,056	885,719,205	77,984,455	2,896,405	3.7
1865.....	55	80,363,013	26,032,384,342	1,035,765,108	84,796,040	3,373,828	4.0
1866.....	58	82,370,200	28,717,146,914	1,066,135,106	93,541,195	3,472,753	3.7
1867.....	58	81,770,200	28,675,159,472	1,144,963,451	93,161,167	3,717,414	4.0
1868.....	59	82,270,200	28,484,288,637	1,125,455,237	92,182,164	3,642,250	4.0
1869.....	59	82,720,200	37,407,028,987	1,120,318,308	121,451,393	3,637,397	3.0
1870.....	61	83,630,200	27,894,539,466	1,036,484,822	90,274,479	3,365,210	3.7
1871.....	62	84,430,200	29,300,986,682	1,209,721,029	95,133,074	3,927,666	4.1
1872.....	61	84,430,200	33,844,509,508	1,428,582,707	109,884,317	4,636,632	4.2
1873.....	59	83,370,200	35,461,032,826	1,474,508,025	115,885,794	4,818,654	4.1
1874.....	59	81,635,200	22,835,927,636	1,280,753,176	74,692,574	4,203,070	5.7
1875.....	59	80,435,200	25,061,237,902	1,408,608,777	81,899,470	4,603,297	5.6
1876.....	59	81,731,200	21,507,274,247	1,295,042,029	70,349,428	4,218,378	5.9
1877.....	58	71,085,200	23,289,243,701	1,373,996,302	76,858,176	4,504,900	5.9
1878.....	57	63,611,500	22,508,438,442	1,307,843,857	73,555,988	4,274,000	5.8
1879.....	59	60,800,200	25,178,770,691	1,400,111,063	82,015,540	4,560,622	5.6
1880.....	57	60,475,200	37,182,128,621	1,516,558,631	121,510,224	4,956,009	4.1
1881.....	60	61,162,700	48,565,818,212	1,776,018,162	139,232,191	5,823,010	3.5
1882.....	61	60,902,700	46,552,846,161	1,595,000,245	151,637,935	5,195,440	3.4
1883.....	63	61,162,700	40,293,165,258	1,568,983,196	132,548,867	5,161,129	3.9
1884.....	61	60,412,700	34,092,037,328	1,524,930,994	111,048,982	4,967,202	4.5
1885.....	64	58,612,700	25,250,791,440	1,295,355,252	83,780,480	4,247,069	5.1
1886.....	63	59,312,700	33,374,682,216	1,519,565,385	109,067,589	4,965,900	4.5
1887.....	64	60,862,700	34,872,848,796	1,569,626,325	114,397,209	5,146,316	4.5
1888.....	63	60,762,700	30,863,686,669	1,870,198,528	101,192,415	5,148,192	5.1
1889.....	63	60,762,700	37,796,465,529	1,737,637,473	114,839,820	5,800,784	5.6
1890.....	64	60,812,700	37,660,686,572	1,753,040,145	123,074,139	5,728,820	4.7
1891.....	63	60,772,700	34,653,698,770	1,584,935,500	111,651,471	5,195,528	4.6
Total.....		168,493,207	1,650,317,307,349	142,424,120,850	181,615,572	13,644,226	4.4

* The capital is for various dates, the amounts at a uniform date in each year not being obtainable.
† Yearly average for 38 years. ‡ Totals for 38 years.

The clearing-house transactions of the assistant treasurer of the United States at New York for the year ended October 1, 1891, were as follows:

Exchanges received from clearing house.....	\$334, 374, 650.88
Exchanges delivered to clearing house.....	129, 791, 449.74
Balances paid to clearing house.....	204, 860, 215.84
Balances received from clearing house.....	277, 014.70

Showing that the amount paid by the assistant treasurer to the clearing house was in excess of the amount received by him..... 204, 583, 201.14

The debit balances were paid to the clearing house, as follows:

United States gold certificates.....	\$138, 761, 000.00
United States Treasury notes.....	41, 109, 000.00
Legal tenders and change.....	24, 990, 215.84
	204, 860, 215.84

COMPARATIVE STATEMENT OF THE EXCHANGES OF THE CLEARING HOUSES OF THE UNITED STATES FOR OCTOBER, 1891, AND OCTOBER, 1890.

Clearing house at—	Exchanges for month ended—		Comparisons.	
	October 31, 1891.	October 31, 1890.	Increase.	Decrease.
New York.....	\$3, 282, 100, 627	\$3, 596, 533, 434		\$284, 423, 807
Boston.....	455, 197, 952	483, 897, 338		28, 699, 386
Philadelphia.....	311, 008, 476	339, 763, 781		28, 755, 305
Chicago.....	421, 521, 165	405, 679, 991	\$15, 841, 174	
St. Louis.....	104, 433, 739	99, 714, 641	4, 719, 098	
San Francisco.....	83, 146, 979	84, 285, 069		1, 138, 090
Baltimore.....	63, 803, 118	60, 887, 827		3, 084, 709
Pittsburg.....	63, 546, 000	74, 763, 561		11, 217, 561
Cincinnati.....	60, 696, 500	59, 881, 150	1, 285, 350	
New Orleans.....	46, 079, 497	50, 454, 449		4, 374, 952
Kansas City.....	46, 745, 573	45, 334, 589	1, 410, 984	
Louisville.....	29, 481, 918	33, 526, 734		4, 044, 816
Providence.....	26, 730, 000	27, 272, 100		541, 300
Milwaukee.....	34, 251, 767	40, 873, 860		6, 622, 093
Minneapolis.....	43, 743, 501	40, 100, 896	3, 643, 105	
Denver.....	21, 049, 893	21, 538, 919		489, 026
St. Paul.....	24, 710, 213	21, 653, 655	3, 056, 558	
Omaha.....	19, 970, 064	24, 444, 498		4, 474, 434
Cleveland.....	24, 370, 375	26, 385, 557		2, 015, 182
Detroit.....	30, 632, 199	29, 238, 400	1, 393, 799	
Buffalo.....	37, 063, 592	36, 168, 981	1, 494, 611	
Memphis.....	14, 888, 843	12, 053, 540	2, 835, 303	
Columbus.....	14, 834, 300	16, 055, 000		1, 220, 700
Richmond.....	10, 516, 696	10, 154, 057	362, 639	
Indianapolis.....	17, 091, 274	20, 485, 471		3, 394, 197
Hartford.....	9, 810, 105	8, 970, 715	839, 390	
Duluth.....	8, 327, 648	10, 635, 672		2, 308, 024
Peoria.....	8, 149, 047	8, 654, 285		505, 238
Galveston.....	52, 433, 043	40, 039, 266	12, 403, 777	
St. Joseph.....	7, 426, 700	7, 166, 387	260, 313	
New Haven.....	7, 114, 967	6, 304, 301	810, 666	
Springfield.....	6, 101, 811	6, 322, 670		217, 859
Worcester.....	5, 875, 876	6, 209, 927		334, 051
Portland.....	5, 847, 287	6, 278, 028		430, 741
Norfolk.....	5, 819, 963	7, 176, 869		1, 356, 906
Syracuse.....	4, 056, 693	4, 173, 072		116, 379
Los Angeles.....	3, 778, 837	3, 243, 121	535, 716	
Wichita.....	2, 471, 072	3, 298, 848		827, 776
Lowell.....	4, 479, 510	4, 067, 084	412, 426	
Grand Rapids.....	4, 490, 406	3, 473, 636	1, 016, 770	
Topeka.....	1, 890, 204	2, 100, 831		207, 627
Siox City.....	4, 422, 926	4, 603, 259		380, 333
Tacoma.....	5, 044, 412	5, 379, 615		335, 203
Seattle.....	4, 063, 138	5, 444, 627		1, 376, 489
Rochester.....	6, 550, 918	6, 833, 410		282, 492
Salt Lake.....	6, 649, 649	7, 123, 350		473, 701
Houston.....	*28, 753, 049	New		
Total.....	5, 453, 014, 773	5, 794, 396, 971	52, 286, 679	393, 648, 877
		5, 453, 014, 773		52, 286, 679
Decrease.....		341, 382, 198		341, 382, 198

*Omitted in footing.

COMPARATIVE STATEMENT OF THE EXCHANGES OF THE CLEARING HOUSES OF THE UNITED STATES FOR WEEKS ENDED OCTOBER 31, 1891, AND OCTOBER 31, 1890.

Clearing house at—	Exchanges for week ended—		Comparisons.	
	October 31, 1891.	October 31, 1890.	Increase.	Decrease.
New York.....	\$687,083,289	\$781,139,807	.....	\$94,056,518
Boston.....	92,841,697	104,327,201	.....	11,485,504
Philadelphia.....	66,456,330	68,223,404	.....	1,767,074
Chicago.....	89,692,167	87,196,991	2,495,176	.....
St. Louis.....	21,865,936	21,169,672	696,264	.....
San Francisco.....	17,971,744	20,506,150	.....	2,534,406
Baltimore.....	13,588,763	12,935,819	652,944	.....
Pittsburg.....	13,622,345	15,520,963	.....	1,898,618
Cincinnati.....	13,200,800	12,485,200	715,600	.....
New Orleans.....	10,610,135	12,460,712	.....	1,850,577
Kansas City.....	10,601,074	10,171,260	429,814	.....
Louisville.....	6,190,093	7,328,052	.....	1,138,049
Providence.....	7,190,600	5,852,000	1,337,700	.....
Milwaukee.....	7,704,661	8,958,323	.....	1,253,662
Minneapolis.....	9,247,600	8,641,646	605,954	.....
Denver.....	4,327,932	4,111,679	216,253	.....
St. Paul.....	5,234,413	5,119,316	105,097	.....
Omaha.....	4,763,303	5,954,614	.....	1,191,311
Cleveland.....	5,338,674	5,426,443	.....	87,769
Detroit.....	6,661,509	5,636,223	1,025,286	.....
Buffalo.....	8,269,498	7,025,878	643,620	.....
Memphis.....	3,782,114	3,407,562	374,552	.....
Columbus.....	3,155,400	4,228,900	.....	1,073,500
Richmond.....	2,350,247	1,951,834	407,413	.....
Indianapolis.....	4,533,343	4,313,720	219,623	.....
Hartford.....	1,809,902	1,902,037	.....	92,135
Duluth.....	1,769,613	2,471,524	.....	701,911
Peoria.....	1,099,396	1,900,702	.....	201,306
Galveston.....	9,449,603	7,885,290	1,564,313	.....
St. Joseph.....	1,598,393	1,687,125	.....	88,732
New Haven.....	1,200,023	1,210,503	83,520	.....
Springfield.....	1,235,164	1,206,741	.....	31,577
Worcester.....	1,217,500	1,391,249	.....	173,749
Portland.....	1,329,802	1,395,244	.....	71,442
Norfolk.....	1,354,838	1,662,645	.....	307,807
Syracuse.....	843,910	955,239	.....	111,329
Los Angeles.....	978,270	888,473	89,806	.....
Wichita.....	530,314	695,803	.....	165,489
Lowell.....	624,575	1,083,340	.....	198,771
Grand Rapids.....	817,782	706,651	111,131	.....
Tsapeka.....	385,407	410,438	.....	25,031
Sioux City.....	957,978	1,076,783	.....	118,805
Tacoma.....	976,341	1,247,407	.....	271,066
Seattle.....	785,557	1,163,588	.....	378,031
Bocheater.....	1,356,152	1,465,414	.....	109,262
Salt Lake.....	1,431,700	1,403,983	27,777	.....
Boston.....	5,914,100	6,621,370	.....	107,276
Total.....	1,154,961,966	1,264,001,950	12,366,843	121,496,827
		1,154,961,966		12,366,843
Decrease.....		109,129,984		109,129,984

The following table shows the transactions of the clearing houses located in forty-seven cities for the year ended September 30, 1891, from official returns received from the manager of the New York Clearing-House Association, comparisons being made with the year ended September 30, 1890, the increase or decrease in the exchanges being indicated. Similar information with respect to balances was not obtainable:

COMPARATIVE STATEMENT OF THE EXCHANGES OF THE CLEARING HOUSES OF THE UNITED STATES FOR THE YEARS ENDED SEPTEMBER 30, 1891, AND SEPTEMBER 30, 1890.

Clearing house at—	Exchanges for years ended—		Comparisons.	
	September 30, 1891.	September 30, 1890.	Increase.	Decrease.
New York	\$34,053,698,770	\$37,660,686,572		\$3,606,987,802
Boston	4,795,594,052	5,102,281,307		306,687,255
Philadelphia	3,372,915,551	3,701,919,517		329,003,966
Chicago	4,338,693,167	3,902,529,694	\$436,163,473	
St. Louis	1,124,330,218	1,093,537,693	30,792,525	
San Francisco	905,864,727	846,602,454	59,262,273	
Baltimore	724,710,877	742,018,356		17,307,479
Pittsburg	699,447,762	768,287,372		68,839,610
Cincinnati	655,896,900	633,753,600	22,143,300	
New Orleans	533,110,103	525,247,794	6,862,309	
Kansas City	451,745,153	487,507,511		35,762,358
Louisville	367,501,443	399,788,145		32,286,702
Providence	276,980,218	266,073,300	10,906,918	
Milwaukee	338,884,381	313,480,592	25,403,789	
Minneapolis	343,247,803	286,093,080	57,154,723	
Denver	228,393,982	249,909,843		21,515,861
St. Paul	227,802,173	225,649,501	2,152,672	
Omaha	218,446,893	245,486,446		27,039,553
Cleveland	264,540,195	251,299,223	13,240,972	
Detroit	310,737,141	286,982,983	23,754,158	
Buffalo	386,012,271	291,749,637	94,262,634	
Memphis	127,310,014	130,738,365		3,428,351
Columbus	157,559,500	148,473,620	9,085,880	
Richmond	117,390,654	111,204,426	6,186,228	
Indianapolis	103,555,836	106,195,064		2,639,228
Hartford	104,306,617	105,760,716		1,453,099
Duluth	102,676,553	98,618,952	6,057,601	
Peoria	88,619,276	80,084,079	8,535,197	
Galveston	304,153,201	108,280,369	195,862,832	
St. Joseph	77,601,162	76,148,819	1,512,343	
New Haven	70,343,940	67,150,497	3,193,443	
Springfield	63,624,286	64,874,184		1,249,898
Worcester	61,714,694	59,287,812	2,426,882	
Portland	63,612,780	60,469,620	3,043,160	
Norfolk	56,710,906	48,531,055	13,379,851	
Syracuse	44,904,345	40,111,353	4,792,992	
Los Angeles	37,097,422	31,020,204	6,077,188	
Wichita	27,849,364	38,222,619		10,373,255
Lowell	41,114,780	37,482,036	3,632,744	
Grand Rapids	42,265,678	36,606,085	5,599,613	
Topeka	19,921,416	19,071,545	849,871	
St. Louis City	50,557,892	45,513,287	5,044,575	
Tacoma	50,383,690	40,683,662	9,700,028	
Seattle	51,945,910	54,185,684		2,239,774
Rochester	75,781,309	New	75,781,309	
Salt Lake	80,845,166	New	80,845,166	
Houston	163,893,754	New	163,893,754	
Total	56,803,253,957	59,882,477,513	1,387,000,633	4,466,824,189
Decrease		3,079,223,556		1,387,600,633

It will be observed that as compared with the previous year there was a decrease in the volume of exchanges amounting to over \$3,000,000,000, and that nearly the whole of such decrease occurred in the three principal eastern cities. The exchanges in New York amounted to about 60 per cent of the whole sum for the United States.

A table will be found on page 171 of the Appendix,* compiled from returns made to the Clearing House by the national banks in New York City, exhibiting the movement of their reserve, weekly, during October, for the last fifteen years.

STATE, SAVINGS, PRIVATE BANKS, LOAN AND TRUST COMPANIES.

In addition to reporting the condition of associations organized under national authority, the law provides that the Comptroller of the Currency shall procure and publish in his annual report to Congress statements exhibiting the condition of banks, banking companies, and savings banks organized under State and Territorial laws; and through the courtesy of public officials, in all but 18 of the States and Territories, this Bureau has been favored with statements of condition of such banking institutions. It has been the custom for the past few years to add to information of that character similar returns from banks in States in which examinations are not authorized by law and reports of condition exacted. Such information is procured through direct correspondence with each bank and banker, over 5,500 having been requested to furnish statements for this report.

While there is an apparent reluctance upon the part of proprietors of private banks to submit reports of their condition, officers of incorporated institutions report so generally that the returns herewith given represent over 93 per cent of these institutions stated to be in operation, and unquestionably a larger percentage of their total banking resources. During the year ended January 1, 1891, there was an increase of 606 over the prior year in number of banks organized, and an increase of 583 in the number from which reports have been received this year, indicating that the field is practically covered by the returns herewith published. Deviating in a measure from the plan of tabulating these reports as heretofore given (official and unofficial returns having been abstracted and compiled separately), it has been deemed best to consolidate all reports of each class of banks by States, simply indicating official and unofficial returns by proper references.

Including reports made by private banks and bankers, statements representing the resources and liabilities of 4,989 incorporated and private banking institutions have been received, the aggregate resources amounting to \$3,448,785,431, the principal items of assets being \$805,901,113, loans on real estate; \$413,938,942 on collateral security other than real estate; \$840,567,612 other loans and discounts; \$157,933,522 United States bonds; \$327,172,153 State, county, and municipal bonds; \$384,888,905 railroad, bank, and other stocks and bonds; \$212,520,844 due from banks and bankers; \$85,804,914 real estate, etc.; \$165,634,081 cash on hand. The aggregate capital employed amounts to \$356,749,315; surplus and undivided profits, \$304,624,493; deposits, \$2,661,752,961.

Of the 4,989 reports, 2,572 are made by commercial institutions, classified in this compilation, as State banks, having an aggregate capital of \$208,564,841; surplus and undivided profits, \$81,116,533; deposits, \$556,637,012.

Reports from 171 loan and trust companies show their aggregate resources to be \$536,628,202. The capital of these companies is \$79,292,889; surplus and undivided profits, \$55,503,845; and deposits, \$355,330,080.

Especial interest attaches to the operations and condition of savings banks, the repositories of the accumulations of the wage-earners, in view of the extent of the obligations of these institutions and particularly as their deposits represent nearly 90 per cent of their entire liabilities. Including the 364 stock savings banks, reports of condition have been received from 1,011 savings banks and savings institutions. Of the 647 non-capitalized institutions, classed as mutual, all but 11 are located in the New England and Middle States, while of those with

capital but 28 are to be found in that section, the remainder, 336, being in the Southern and Western States and Territories.

The aggregate resources of all savings banks amount to \$1,854,517.069, of which loans on real estate amount to \$687,583,977; loans on collateral security other than real estate, \$93,679,153; and other loans and discounts, \$193,134,045. The following figures represent their investments in bonds, stocks, etc.: In United States bonds, \$139,267,045; State, county, and municipal bonds, \$320,278,708; in all other bonds and stock, \$268,994,583. The amount invested in real estate is \$30,438,232, and the funds with other banks and cash on hand, \$70,660,882 and \$29,720,473, respectively. Of the liabilities of these 1,011 institutions, \$32,106,127 represents their capital, \$155,857,493 surplus and undivided profits, \$1,623,079,749 savings deposits, and \$31,746,393 other deposits. The interest paid by mutual institutions ranges from 2 to 4 per cent, and by stock savings banks from 2 to 6 per cent, the average rate paid by the latter slightly exceeding, apparently, the rate paid by mutual institutions, while the deposits held by the mutuals are about 75 per cent of the total deposits in both classes.

Of the 2,500 reports of condition made to this Bureau directly, 1,235 were submitted by private banks and bankers, having an aggregate capital of \$36,785,458; surplus and undivided profits, \$12,146,622; deposits, \$94,959,727.

The following tables present summaries of this information:

AGGREGATE RESOURCES AND LIABILITIES OF ALL STATE BANKS, LOAN AND TRUST COMPANIES, AND SAVINGS AND PRIVATE BANKS, 1890-'91.

	State banks.	Loan and trust companies.	Savings banks.	Private banks.	Total.
	2,572 banks.	171 banks.	1,011 banks.	1,235 banks.	4,989 banks.
RESOURCES.					
Loans on real estate.....	\$37,247,244	\$65,072,641	\$687,583,977	\$15,997,251	\$805,901,113
Loans on collateral security other than real estate.....	78,509,230	225,012,238	93,679,153	16,738,321	413,938,942
Other loans and discounts.....	507,461,243	66,791,541	198,134,045	68,180,783	840,567,612
Overdrafts.....	4,044,702	105,608	286,254	2,475,025	6,911,589
United States bonds.....	1,100,307	16,957,015	139,267,045	1,509,155	157,933,522
State, county, and municipal bonds.....	2,150,065	3,828,397	320,278,708	908,983	327,172,153
Railroad bonds and stocks.....	595,572	29,771,125	115,901,821	737,289	147,095,757
Bank stocks.....	426,850	1,158,776	45,038,830	634,140	47,259,596
Other stocks and bonds.....	37,529,420	43,157,008	107,963,932	1,883,192	190,533,552
Due from other banks and bankers.....	82,531,530	39,948,373	70,660,882	19,380,059	212,520,844
Real estate, furniture, and fixtures.....	28,791,441	17,357,290	30,438,232	9,217,951	85,804,914
Current expenses and taxes paid.....	2,805,083	743,684	971,266	797,326	5,377,359
Cash and cash items.....	107,453,889	16,482,207	29,720,473	11,977,512	165,634,081
Other resources.....	15,281,566	11,141,299	14,502,451	1,209,081	42,134,397
Total.....	905,994,142	536,628,202	1,854,517,069	151,646,018	3,448,785,431
LIABILITIES.					
Capital stock.....	208,564,841	79,292,889	32,106,127	36,785,458	356,749,315
Surplus fund.....	60,006,623	38,412,197	130,042,098	8,993,987	237,454,905
Other undivided profits.....	21,109,910	17,991,648	25,815,395	3,152,635	67,109,588
Debenture bonds outstanding.....	.....	18,907,550	.....	.....	18,907,550
State-bank notes outstanding.....	110,574	83,396	.....	.....	193,970
Dividends unpaid.....	709,830	.....	19,364	.....	812,590
Individual deposits.....	550,037,012	355,330,080	31,746,393	94,959,727	1,038,673,212
Savings deposits.....	.....	.....	1,623,079,749	.....	1,623,079,749
Due to other banks and bankers.....	38,826,003	2,210,772	2,708,325	2,240,371	46,045,371
Other liabilities.....	20,020,389	25,299,670	8,941,718	5,513,840	59,784,617
Total.....	905,994,142	536,628,202	1,854,517,069	151,646,018	3,448,785,431

NUMBER, CAPITAL STOCK, SURPLUS AND UNDIVIDED PROFITS, AND DEPOSITS OF ALL STATE BANKS, LOAN AND TRUST COMPANIES, AND SAVINGS (MUTUAL AND STOCK) AND PRIVATE BANKS, 1890-91.

Classes.	No. banks.	Capital.	Surplus and undivided profits.	Deposits.
State banks.....	2,572	\$208,564,841	\$81,116,533	\$556,637,012
Loan and trust companies.....	171	79,292,889	55,563,845	355,330,080
Savings banks (mutual).....	647	.....	142,456,741	1,402,332,665
Savings banks (stock).....	364	32,106,127	13,400,752	252,493,477
Private banks.....	1,235	36,785,458	12,140,622	94,959,727
Total.....	4,989	356,749,315	304,024,493	2,661,752,961

The following table exhibits by States and Territories the capital employed by national banks on July 9, 1891, and by the State, stock savings, private banks, and loan and trust companies at date of latest returns to this Bureau, the aggregate capital of all classes by States, and the total of each class and of all, from which it appears that the total capital amounts to \$1,029,652,912. The capital of the national banks is \$672,903,597, State banks \$208,564,841, stock savings banks \$32,106,127, private banks \$36,785,458, loan and trust companies \$79,292,889.

TABLE SHOWING, BY STATES AND TERRITORIES, THE CAPITAL OF THE NATIONAL BANKS ON JULY 9, 1891, AND OF THE STATE, STOCK SAVINGS, AND PRIVATE BANKS AND LOAN AND TRUST COMPANIES AT DATE OF LATEST REPORTS TO THIS BUREAU.

States and Territories.	National banks.	State banks.	Stock savings banks.	Private banks.	Loan and trust companies.	Total.
Maine.....	\$10,935,000	.....	.....	.....	\$822,909	\$11,757,909
New Hampshire.....	6,280,000	.....	.....	.....	1,580,509	7,860,509
Vermont.....	7,210,000	.....	\$654,450	.....	.....	7,864,450
Massachusetts.....	97,167,500	.....	.....	.....	7,050,000	104,217,500
Rhode Island.....	20,184,050	\$1,049,602	.....	.....	3,164,409	23,398,052
Connecticut.....	23,274,370	2,340,000	.....	.....	1,036,600	26,650,970
New York.....	80,666,060	31,370,700	.....	\$717,065	26,387,000	145,140,815
New Jersey.....	14,313,350	1,656,666	.....	.....	1,510,840	17,480,856
Pennsylvania.....	71,944,211	8,411,200	1,113,900	1,709,229	24,374,821	106,653,361
Delaware.....	2,133,985	680,000	.....	.....	500,000	3,313,985
Maryland.....	16,559,750	1,303,150	413,870	188,897	.....	18,465,667
District of Columbia.....	2,810,720	.....	.....	.....	2,833,810	5,644,530
Virginia.....	4,476,300	5,775,660	.....	.....	.....	10,251,960
West Virginia.....	2,240,270	969,225	50,000	.....	.....	3,259,495
North Carolina.....	2,631,170	1,848,722	40,000	286,770	.....	4,806,662
South Carolina.....	1,673,000	1,342,948	324,727	.....	.....	3,340,675
Georgia.....	4,347,890	3,731,506	269,200	481,650	.....	8,830,246
Florida.....	1,325,000	584,300	80,000	74,003	.....	2,063,303
Alabama.....	4,294,000	814,400	150,000	352,000	.....	5,610,400
Mississippi.....	1,162,000	3,268,095	.....	.....	.....	4,428,095
Louisiana.....	4,430,500	2,620,200	100,000	.....	.....	7,150,700
Texas.....	25,492,800	475,240	122,460	1,568,972	.....	27,649,472
Arkansas.....	1,600,000	1,130,458	.....	.....	.....	2,730,458
Kentucky.....	15,194,400	17,902,795	.....	107,500	.....	33,204,695
Tennessee.....	10,330,000	5,016,974	611,000	.....	.....	15,957,974
Ohio.....	43,444,000	4,842,730	1,843,400	2,702,943	.....	52,833,073
Indiana.....	12,477,000	2,486,183	.....	3,004,640	.....	17,967,829
Illinois.....	36,091,750	4,135,500	4,997,000	4,634,573	3,950,000	53,808,823
Michigan.....	15,269,000	2,147,800	7,065,000	1,216,753	.....	25,689,553
Wisconsin.....	6,910,000	5,161,200	.....	1,343,322	.....	13,414,522
Iowa.....	13,062,400	6,460,898	4,565,500	5,383,039	2,388,650	31,860,487
Minnesota.....	14,125,000	8,111,000	225,000	2,053,092	2,697,968	27,212,060
Missouri.....	24,690,000	16,730,036	.....	1,234,000	1,995,400	44,649,436
Kansas.....	12,894,100	5,782,490	.....	2,176,654	.....	20,853,244
Nebraska.....	12,925,100	9,034,260	790,200	3,840,900	.....	26,589,560
Colorado.....	8,612,821	1,370,500	.....	143,560	.....	10,126,881
Nevada.....	282,000	.....	.....	226,000	.....	508,000
California.....	8,425,000	42,564,010	7,106,403	1,918,631	.....	60,014,044
Oregon.....	4,225,000	813,825	.....	98,000	.....	5,136,825
Oklahoma.....	200,000	.....	.....	30,000	.....	230,000

TABLE SHOWING, BY STATES AND TERRITORIES, THE CAPITAL OF THE NATIONAL BANKS ON JULY 9, 1891, ETC.—Continued.

States and Territories.	National banks.	State banks.	Stock savings banks.	Private banks.	Loan and trust companies.	Total.
Indian Territory	\$150,000					\$150,000
Arizona	200,000	\$328,200				528,200
North Dakota	2,280,000	728,000				3,008,000
South Dakota	2,585,000	1,759,338		\$311,205		4,655,543
Idaho	537,500			2,500		540,000
Montana	4,140,000	265,000		35,000		4,440,000
New Mexico	1,100,000	100,000	\$80,000	16,693		1,296,693
Utah	2,750,000	1,444,210	727,287	320,000		5,241,497
Washington	6,415,000	2,014,820	776,630	100,000		9,306,450
Wyoming	1,350,000			317,868		1,667,868
Total	672,903,597	208,564,841	32,106,127	36,785,458	\$79,292,889	1,020,652,912

The distribution of the circulating medium of the country as shown by the cash holdings of national and other banks on or about the close of the fiscal year ended June 30, 1891, is exhibited in the following table.

The total cash on hand held by banks other than national, 4,989 in number, was \$165,634,081, of which \$8,883,552, was gold, \$1,939,647 silver, \$45,456,720 paper currency, \$15,713,390 specie not classified, and \$93,640,772 cash not classified. The total amount held by national and other banks was \$479,085,588.

STATEMENT SHOWING THE AMOUNT OF GOLD, SILVER, ETC., HELD BY NATIONAL BANKS ON JULY 9, 1891, AND BY OTHER BANKING INSTITUTIONS ON OR ABOUT THE SAME DATE.

Classification.	National banks.	Other (4,989) banking institutions.	Total.
Gold coin	\$87,695,142	\$8,883,552	\$96,578,694
Gold Treasury certificates	63,210,310		63,210,310
Gold (clearing house) certificates	6,706,000		6,706,000
Silver dollars	7,631,470		7,631,470
Silver fractional	5,023,920	1,939,647	6,963,567
Silver Treasury certificates	19,802,695		19,802,695
National bank notes	21,418,977		21,418,977
Legal-tender notes	100,399,811	45,456,720	145,856,531
Fractional currency	863,182		863,182
Specie not classified		15,713,390	15,713,390
Cash not classified		93,640,772	93,640,772
Total	313,451,507	165,634,081	479,085,588

In the Appendix,* p. 236, tables will be found showing by States and Territories the condition of banks other than national, as obtained from both official and unofficial sources; aggregate resources and liabilities of each class; comparative statements of condition of State banks, 1872 to 1891; loan and trust companies, 1886-'87 to 1890-'91; savings banks, 1886-'87 to 1890-'91; private banks, 1887-'91; deposits in savings banks, number of depositors and average amount due each, by States, in 1889-'90 and 1890-'91; and a summary of condition of the chartered banks in the Dominion of Canada. On page 234 of the Appendix* will be found a table showing by States and Territories the estimated population of each on June 1, 1891, based on the census of 1890, and the aggregate capital, surplus, undivided profits, and individual deposits of national and State banks, loan and trust companies, and savings and

private banks of the United States at date of reports of the various classes, nearest thereto, the average of these per capita and the per capita average of such resources in each class of banks. It appears that the population of the country on the date in question was 64,156,300, and the total banking funds \$5,840,438,191, an average of \$91.03. The per capita averages of such resources in each class of banks are: National banks, \$39.32; State banks, \$13.13; loan and trust companies, \$7.63; savings banks, \$28.72; and private banks, \$2.23.

LOAN AND TRUST COMPANIES IN THE DISTRICT OF COLUMBIA.

During the first session of the Fifty-first Congress an act passed entitled, "An act to provide for the incorporation of trust, loan, mortgage, and certain other corporations within the District of Columbia." This act was approved on the 1st day of October, 1890. Under its provisions companies can be formed for the purpose of carrying on within the District of Columbia any one of the three classes of business specified as follows:

First. A safe deposit, trust, loan, and mortgage business.

Second. A title insurance, loan, and mortgage business.

Third. A security, guaranty, indemnity, loan, and mortgage business.

It is further provided that the capital stock of said companies shall not be less than \$1,000,000, and that any of these companies may conduct a storage business when its capital stock amounts to the sum of not less than \$1,200,000.

Two methods are provided whereby companies may come under the provisions of the act.

(1) By an association of not less than twenty-five natural persons to form a company, which shall receive its original charter from the Commissioners of the District of Columbia and thereby become a body corporate and politic, and as such vested with all the powers and charged with all the liabilities conferred and imposed by the act upon companies organized under the provisions thereof.

(2) Provision is made that any safe deposit company, trust company, surety or guaranty company, or title insurance company, incorporated and operating under the laws of the United States or the District of Columbia, or of any of the States, and doing business in said District at the time of the passage of said act, may avail itself of the provisions of the act.

No charters have been issued by the Commissioners of the District of Columbia to corporations formed by the association of natural persons under the first method provided for in the act, but three companies, incorporated previous to the passage of the act and at that time doing business in said District, have availed themselves of its provisions, to wit: The American Security and Trust Company, the Washington Loan and Trust Company, and the National Safe Deposit Company.

The American Security and Trust Company was originally chartered under the laws of the State of Virginia, on the 12th day of October, 1889, with a capital stock of \$1,250,000, divided into shares of the par value of \$100 each. This company executed a certificate of its intention to avail itself of the provisions of the act of Congress, on the 11th day of November, 1890, and filed the same with the Comptroller of the Currency. It having complied with all the provisions of law applicable thereto, on the 17th of November, 1890, the Comptroller issued to said company the certificate contemplated by section 5 of the act approved October 1, 1890, and the company has since that date been operating under its provisions.

The Washington Loan and Trust Company was incorporated under the laws of the State of West Virginia on the 15th day of August, 1889. This company has a capital of \$1,000,000, divided into shares of \$100 each, and was doing business in the District of Columbia at the date of the passage of the act of Congress above referred to. It having filed with the Comptroller of the Currency a certificate of its intention to avail itself of the provisions of the act aforesaid and having complied with the other requirements of the act, the Comptroller issued to said company, on the 13th day of December, 1890, a certificate that it was entitled to transact the business of a trust company.

The National Safe Deposit Company of Washington was at the date of the passage of the act of Congress first above mentioned doing business in the District of Columbia as a safe deposit company, incorporated by act of Congress approved January 22, 1867. On the 17th of March, 1891, this company executed a certificate of its intention to avail itself of the provisions of the act of Congress approved October 1, 1890. It having complied with the provisions of law, the Comptroller issued to said company, on the 3d day of April, 1891, the certificate contemplated by the provisions of section 5 of said act, under which it was authorized to enter upon the business of a trust company. It also has a capital of \$1,000,000.

Each of these companies has declared its intention to avail itself of the provisions of the act of Congress aforesaid for the purpose of carrying on the kind or class of business described in subdivision 1 of section 1 of said act; that is to say, a safe deposit, trust, loan, and mortgage business, in addition to the powers lawfully exercised at the time they severally came under the operations of the act of Congress above referred to. Each of these companies has also deposited with the Comptroller of the Currency securities equal in actual value to one-fourth of the capital stock paid in, and is therefore entitled to become and act as administrator, executor, guardian of the estate of a minor, or undertake any other kindred fiduciary duty authorized by the act. One, the American Security and Trust Company, is also authorized to do a storage business, in accordance with the second proviso to the third paragraph of section 1 of the act above referred to.

These several companies have each been duly examined, and have made and published reports of condition from time to time as contemplated by the provisions of sections 5211, 5212, and 5213 of the Revised Statutes of the United States. A statement of condition at date of last report will be found in the Appendix,* pages 251-253.

Aside from associations formed under the national bank act and those above enumerated, only one other corporation located in the District of Columbia comes in any manner under the supervision of the Comptroller of the Currency.

The institution herein referred to is the National Savings Bank of the District of Columbia. This institution was chartered May 24, 1870, and has since been in operation. It is now, however, practically in process of liquidation, its business being gradually transferred to and absorbed by the National Safe Deposit Company, above referred to. A report of its condition on the 25th of September is published in the Appendix,* page 250, which will show its condition at that time. It is understood to be the purpose of the directors of this bank to complete the transfer of its business to the National Safe Deposit Company and to finally close its affairs at the earliest practicable date.

CONCLUSION.

During the year covered by the report the country has been passing through a financial crisis, unique in its character but of great severity. In no country are the conditions more favorable to the success of well directed enterprise than in this, and in none can the speculative operator find a more tempting and fruitful field. These conditions necessarily tend toward overtrading and undue expansion of credits, and these in due time result in collapse and general financial distress.

Although periods of business disaster follow each other at reasonably well-defined intervals, the multitude, oblivious of the past, are always taken unawares. Those charged with the management of national banks are not free from the optimistic spirit which characterizes their fellows, and hence the associations under their control invariably suffer whenever these periods of depression recur. The failures witnessed during the year just closed exemplify the operations of the forces to which allusion is made.

Whenever we consider the immense shrinkage of values which the liquidations of the past twelve months involves, we are surprised that the associations constituting the national system have not suffered more severely. The growth of this system in recent years must not be overlooked when we are called upon to consider the degree of success that has attended its operations.

It is rapidly becoming popularized and for that reason more intimately connected with the business enterprises of the common people, reflecting with increasing faithfulness the degree of success or failure that attends their various commercial and industrial pursuits. So long as banking remains free, associations will be formed by inexperienced men whose management will sometimes prove unskillful and disastrous. So long as dishonest men exist banks must not expect to entirely escape the defalcations and embezzlements which occasionally startle the public. Failures are inevitable under any system which stops short of governmental guaranty, and the latter is, of course, impracticable. That system, then, is best, all else being equal, which is found upon trial to exhibit the minimum of failures. In this respect, the national system stands unapproached and indisputably superior to all which have preceded it. It is confidently hoped therefore that such measures will be taken by Congress as will serve to perfect a system which has proved so effective in the past, and which is so necessary to the future welfare of the people.

The Comptroller desires in closing to say that the past year has devolved upon the Currency Bureau an amount of labor and responsibility which is entirely unprecedented. To those associated with him in the conduct of the affairs of the Office he is greatly indebted for the intelligent and faithful service which has made it possible to meet these increased responsibilities. He also desires to gratefully acknowledge the valuable assistance rendered him by those charged with the preparation of the statistical matter contained in this report.

EDWARD S. LACEY,
Comptroller of the Currency.

THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

REPORT OF THE COMMISSIONER OF INTERNAL REVENUE.

TREASURY DEPARTMENT,
OFFICE OF INTERNAL REVENUE,
Washington, D. C., November 2, 1891.

SIR: In compliance with the instructions contained in your letter of September 2, 1891, I have the honor to submit the following report of the operations of the Bureau of Internal Revenue for the fiscal year ended June 30, 1891, together with certain additional information relating to the collections made and the work performed during the first three months of the current fiscal year.

* * * * *

COLLECTIONS FOR THE CURRENT FISCAL YEAR.

I estimate that the receipts from all sources of internal revenue will aggregate \$150,000,000 for the current fiscal year.

In order that the receipts shall reach this figure there will have to be a very considerable increase in the collections from distilled spirits, fermented liquors, and cigars. During the first six months of the current fiscal year there will be a decrease of about \$2,500,000 in the tax received from manufactured tobacco and snuff, as compared with the same period of the fiscal year ended June 30, 1890. In my last annual report I estimated that the reduction in the receipts from manufactured tobacco, for the six months ending June 30, 1891, would amount to \$2,290,685.17. The actual decrease was as follows:

One hundred and nineteen millions nine hundred and ninety-one thousand seven hundred and fifty-nine pounds of tobacco were tax-paid at 6 cents per pound from January 1 to June 30, 1891, upon which the reduction of 2 cents per pound amounted to \$2,399,835.18.

I also estimated that the reduction in the receipts from snuff for the six months would be \$92,216.41, but 5,253,008 pounds of snuff were tax-paid at 6 cents per pound from January 1 to June 30, 1891, and the reduction of the tax upon this quantity from 8 to 6 cents per pound resulted in a decrease in the receipts from this source of revenue of \$105,060.16.

The aggregate decrease in the receipts from manufactured tobacco and snuff for the six months ended June 30, 1891, was \$2,504,895.34.

Taking these figures as a basis, it is probable that the reduction of the tax on manufactured tobacco and snuff from 8 to 6 cents per pound will decrease the receipts from this source about \$5,000,000 annually.

I also estimated in my last report that 500,000 gallons of grape brandy, free of tax, would be required to fortify sweet wines, under the provisions of the act of October 1, 1890. The vintage season had commenced, however, before the passage of that act, and the provisions of the law were not fully understood, so that the wine producers did not use as much grape brandy as was anticipated. The actual number of gallons of grape brandy used in the fortification of sweet wines during the fiscal year ended June 30, 1891, was 193,557, the tax upon which, at 90 cents per gallon, would have amounted to \$174,201.30.

It is probable that about double the above quantity of grape brandy will be used for the fortification of sweet wines during the current fiscal year.

RECEIPTS FOR THE PAST SIX FISCAL YEARS.

Fiscal year ended—

June 30, 1891.....	\$146,035,415.97
June 30, 1890.....	142,594,696.57
June 30, 1889.....	130,894,434.20
June 30, 1888.....	124,326,475.32
June 30, 1887.....	118,837,301.06
June 30, 1886.....	116,902,869.44

COLLECTIONS FOR FISCAL YEAR ENDED JUNE 30, 1891.

In my last annual report I estimated that the receipts of this Bureau for the fiscal year ended June 30, 1891, would amount to the sum of \$145,000,000. It affords me pleasure to state that the actual receipts for the year named were \$146,035,415.97, exceeding my estimate in the sum of \$1,035,415.97.

REVENUE AGENTS' DIVISION.

Twenty revenue agents have been employed during the last fiscal year, one as chief of division in this office, ten in charge of territorial divisions, three in the examination of the offices and accounts of collectors, and six in assisting agents in charge of divisions and on special duty.

EXPENSES OF REVENUE AGENTS.

There have been expended from the appropriation for salaries and expenses of revenue agents during the year the following amounts:

Aggregate salary of agents.....	\$43,024.00
Aggregate amount of traveling expenses.....	29,322.43
Stationery furnished agents.....	209.76
Transportation over Pacific railroads.....	380.94
Total.....	72,937.13

WORK OF REVENUE AGENTS.

One thousand six hundred and thirty-seven violations of internal-revenue law have been reported by revenue agents during the year; 744 persons have been arrested on their information; property to the value of \$215,003.85 has been reported by them for seizure, and \$111,324.48 for assessment for unpaid taxes and penalties.

ILLICIT STILLS SEIZED.

The following statement shows the number of illicit stills seized, persons arrested, and casualties to officers and employes during the fiscal year ended June 30, 1891:

Districts.	Stills seized.		Number of persons arrested.	Casualties.	
	Destroyed.	Removed.		Killed.	Wounded.
Alabama.....	78	2	33		
Arkansas.....	22		18		
Florida.....	37		16		*2
Georgia.....	113	48	172		
Thirtieth Illinois.....	1				
Second Kentucky.....	2		2		
Fifth Kentucky.....	2	2	6		
Seventh Kentucky.....	6	1	6		
Eighth Kentucky.....	43	2			

* Deputy Collector C. D. Alexander and Deputy Marshal J. O. Thompson, wounded December 19, 1890.

Districts.	Stills seized.		Number of persons arrested.	Casualties.	
	Destroyed.	Removed.		Killed.	Wounded.
Louisiana.....	2	1	1		
Nebraska.....		1	1		
New Hampshire.....		1	3		
New Mexico.....		1	1		
First New York.....		4			
Fourth North Carolina.....	71	15	27		
Fifth North Carolina.....	145		34	*1	*1
Eleventh Ohio.....		1	1		
South Carolina.....	56	1	15		
Second Tennessee.....	27	3	14		
Fifth Tennessee.....	24	12	14		
Second Virginia.....	1				
Sixth Virginia.....	58	2	12		
West Virginia.....	10		2		
Total.....	698	97	378	1	3

* R. I. Barawell, special employé, killed, and Deputy Marshal T. L. Brim, wounded March 20, 1891.

STILLS SEIZED AND CASUALTIES TO OFFICERS AND EMPLOYÉS FOR THE LAST TWELVE YEARS.

	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.
Stills seized.....	969	756	464	397	377	245	564	456	518	406	583	703
Officers and employés killed.....	3	1	4	1		1			1	1	1	1
Officers and employés wounded.....	7	9	1		1		1	1	1	2	1	3

RECAPITULATION.

Amount expended by revenue agents.....	\$32,842.28
Amount expended by collectors.....	2,319.12
Amount expended for rewards.....	325.41
Amount expended for miscellaneous purposes.....	274.34
Total expended.....	\$35,762.15

TOBACCO DIVISION.

The aggregate amount of taxes collected from tobacco during the last fiscal year was \$32,796,270.97. This amount includes internal-revenue taxes paid by stamps on imported and manufactured tobacco, snuff, cigars, and cigarettes.

The decrease of collections for the last fiscal year as compared with those for the previous fiscal year was \$1,162,720.09. This is due to the reduction by the act of October 1, 1890, of the tax on snuff, chewing and smoking tobacco, January 1, 1891, from 8 to 6 cents per pound, and to the repeal of special taxes relating to tobacco, May 1, 1891.

The tax on cigars and cigarettes was not changed, and the collections therefrom were increased \$1,386,650.39 during the last fiscal year.

	Increase.	Decrease.
Cigars and cheroots.....	\$1,161,008.35	
Cigarettes.....	225,642.04	
Total.....	1,386,650.39	
Tobacco.....		\$1,244,848.69
Snuff.....		11,575.88
Special taxes.....		1,292,945.91
Total decrease of collections, tobacco and snuff.....		2,549,370.48
Deduct increase of collections, cigars and cigarettes.....		1,386,650.39
Net decrease of collections.....		1,162,720.09

The increase in the quantity of tobacco and snuff and in the number of cigars and cigarettes for the last fiscal year over those taxed the previous fiscal year was:

Manufactured tobacco.....	pounds..	14, 437, 331
Snuff.....	do...	1, 168, 553
Total.....		do... 15, 605, 884
Cigars and cheroots	number..	387, 002, 784
Cigarettes.....	do...	451, 284, 080
Total.....		do... 838, 286, 864

The export account shows an increase in manufactured tobacco of 4,239 pounds, a decrease in the number of cigars exported of 40,966, and an increase of the number of cigarettes exported of 35,224,200.

COMPARATIVE STATEMENT.

The following exhibit shows in detail the receipts for the fiscal year ended June 30, 1891, from each particular source of the tobacco tax, as compared with those for the previous fiscal year:

RECEIPTS FROM TOBACCO AND SNUFF.

Manufactured tobacco.....	\$17,080,632.67
Snuff	726,155.39
<hr/>	
Total for year ended June 30, 1891.....	17,806,788.06
Total for year ended June 30, 1890.....	19,063,212.63
<hr/>	
Decrease in collections	1,256,424.57
As follows:	
From chewing and smoking tobacco	1,244,848.69
From snuff	11,575.88

RECEIPTS FROM CIGARS AND CIGARETTES.

Cigars and cheroots.....	\$13,424,678.30
Cigarettes.....	1,342,269.38
	<hr/>
Total for year ended June 30, 1891.....	14,766,947.68
Total for year ended June 30, 1890.....	13,380,297.29
	<hr/>
Increase in collections	1,386,650.39

Of this increase \$1,161,008.35 was on cigars and \$225,642.04 was on cigarettes.

RECEIPTS FROM SPECIAL TAXES.

Manufacturers of cigars.....	\$9,529.73
Decrease, manufacturers of cigars.....	113,366.76
Manufacturers of tobacco	598.75
Decrease, manufacturers of tobacco	4,598.75
Dealers in manufactured tobacco	201,532.31
Decrease, dealers in manufactured tobacco.....	1,129,585.93
Dealers in leaf tobacco	9,150.06
Decrease, dealers in leaf tobacco	35,342.34
Peddlers of tobacco.....	1,724.38
Decrease, peddlers of tobacco	10,052.13

PRODUCTION OF TOBACCO, SNUFF, CIGARS, AND CIGARETTES.

The production of tobacco, snuff, cigars, and cigarettes for the fiscal year ended June 30, 1891, computed from the receipts from stamps sold for all such goods as were put on the market for consumption, together with those removed in bond for export and including importations, was:

TOBACCO AND SNUFF.		Pounds.
Tobacco		243,505,848
Snuff		10,390,194
Total tobacco and snuff taxed		253,896,042
Tobacco and snuff exported		12,854,991
Total production for fiscal year 1891		266,751,033
Deduct imported tobacco and snuff		490,670
Total domestic production		266,260,363
Total production 1890	251,140,860	
Less imported	324,969	
		250,815,891
Total increase over fiscal year 1890		15,444,472

The increase of taxed tobacco and snuff over fiscal year 1890 was 15,605,884 pounds; the increase of tobacco and snuff exported was 4,289 pounds; and the increase of tobacco and snuff imported and withdrawn for consumption was 165,701 pounds.

CIGARS AND CHEROOTS.		Number.
Cigars and cheroots taxed		4,474,892,767
Add quantity exported		3,209,484
Total taxed and exported		4,478,102,251
Deduct quantity imported 1891 (estimated average 12 pounds per 1,000)		71,405,270
Total domestic production 1891		4,406,696,981
Taxed in 1890	4,087,889,983	
Exported in 1890	3,250,450	
Total for 1890	4,091,140,433	
Less imported	101,145,999	
		3,989,994,434
Increase over fiscal year 1890		416,702,547

CIGARETTES.		
Cigarettes taxed		2,684,538,760
Add cigarettes exported		294,534,250
Total taxed and exported		2,979,073,010
Deduct cigarettes imported 1891 (estimated average, 3 pounds per 1,000)		2,802,125
Total product for fiscal year 1891		2,976,270,885
Taxed in 1890	2,233,254,680	
Exported in 1890	259,310,050	
Total taxed and exported	2,492,564,730	
Less imported 1890	3,397,000	
		2,489,167,730
Increase over fiscal year 1890		487,103,155

The increase during said fiscal year of 1891 of taxed cigars was 387,002,784; and the decrease of cigars exported was 40,966; and of cigars imported and withdrawn for consumption was 29,740,729.

The increase of taxed cigarettes was 451,284,080, and of cigarettes exported was 35,224,200. The decrease of cigarettes imported was 594,875.

SPECIAL-TAX PAYERS.

Special-tax year ended April 30, 1891.

Manufacturers of tobacco and snuff	1,021
Manufacturers of cigars and cigarettes	21,337
Peddlers of tobacco	1,477
Dealers in leaf tobacco	3,593
Dealers in leaf tobacco not exceeding 25,000 pounds	1,266
Retail dealers in leaf tobacco	3
Dealers in manufactured tobacco	611,411
Total	640,108
Special-tax payers previous special-tax year	632,229
Increase during special-tax year 1891	7,879

The act of October 1, 1890, abolishing all special taxes upon the foregoing, went into effect May 1, 1891, and in lieu thereof requires registry, (except in the cases of dealers in manufactured tobacco, 611,411 persons who are exempted.) No reports are on file at present showing number of manufacturers, peddlers, dealers, and retail dealers who have so registered.

SMOKING OPIUM.

Under the act of October 1, 1890, section 36, a tax of \$10 per pound was levied upon all opium manufactured in the United States for smoking purposes.

Proper regulations, blanks, forms, records, bonds, stamps, etc., have been prepared in accordance with the terms of said act, but no persons qualified as manufacturers of opium during the fiscal year, and except the issuing by this office of proper stamps, records, blanks, etc., to the collector of the first district of California, there is at present nothing to report in connection with the legitimate manufacture of opium in the United States under the provisions of said act.

In order to make this law effective several amendments will be required, among which one forfeiting illicit factories, and also duly authorized factories where there is any serious violation of the law. It should also be made a penal offense to remove stamps, to re-use stamps, or to have in possession stamps that have once been used. In addition to this, I would suggest that Congress be requested to further amend the act by requiring all dealers in crude opium to keep such books and to make such returns as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, may direct.

DIVISION OF DISTILLED SPIRITS.

The statements under the above heading relating to the fiscal year ended June 30, 1891, exhibit the number of grain, molasses, and fruit distilleries which were registered and operated in each collection district and State; the number and capacity of the grain and molasses distilleries in operation at the beginning of each month in the year and of

the three following months; the number of grain distilleries, classified according to their different capacities, registered and operated in each district and State; the quantities and several kinds of grain and other materials used in the production of distilled spirits in each collection district and State; the different kinds of fruit brandy produced during the year in each collection district and State; the quantity of distilled spirits, in proof gallons, rectified in the several districts and States; and the number of cattle and hogs fed at the registered grain distilleries, together with other items.

DISTILLERIES REGISTERED AND OPERATED.

The following statement shows the number of distilleries registered and operated during the fiscal year ended June 30, 1891:

States and Territories.	Grain.		Molasses.		Fruit.		Total registered.	Total operated.
	Registered.	Operated.	Registered.	Operated.	Registered.	Operated.		
Alabama.....	7	7			15	15	22	22
Arkansas.....	46	32			39	39	85	71
California.....	3	3			288	284	291	287
Colorado.....	1	1					1	1
Connecticut.....	3	3			35	35	38	38
Georgia.....	95	87			50	50	145	137
Illinois.....	19	19			18	16	37	35
Indiana.....	15	13			41	34	56	47
Iowa.....					3	3	3	3
Kansas.....					1	1	1	1
Kentucky.....	401	340	1	1	143	143	545	484
Louisiana.....					4	4	4	4
Maryland.....	26	23			12	12	38	35
Massachusetts.....	1	1	8	8	4	4	13	13
Minnesota.....	2	2					2	2
Missouri.....	49	39			52	50	101	89
Montana.....					1	1	1	1
Nebraska.....	2	2					2	2
New Hampshire.....			1	1			2	2
New Jersey.....	1	1			48	48	49	49
New Mexico.....					5	5	5	5
New York.....					42	41	44	43
North Carolina.....	542	503			784	780	1,326	1,283
Ohio.....	29	25			24	22	53	47
Oregon.....	2	2			8	8	10	10
Pennsylvania.....	111	99			9	8	120	107
South Carolina.....	26	24			6	6	32	30
Tennessee.....	108	88			190	177	298	265
Texas.....	10	2	1	1	4	4	15	7
Virginia.....	110	101			588	588	698	289
West Virginia.....	4	2			5	5	9	7
Wisconsin.....	3	3					3	3
Total.....	1,618	1,424	11	11	2,420	2,384	4,049	3,819

COMPARATIVE STATEMENT OF DISTILLERIES REGISTERED AND OPERATED.

The whole number of grain distilleries registered during the fiscal year ended June 30, 1891, was 1,618, of which number 1,424 were operated.

The numbers registered and operated during the fiscal year ended June 30, 1890, were 1,536 and 1,397, respectively, showing an increase during the last fiscal year of 82 in the number registered and of 27 in the number operated.

The larger portion of the increase in the number registered and the whole of the increase in the number operated occurred in the class of

distilleries having the smaller capacities for the production of spirits, there having been an increase of 70 in the number of distilleries of this class registered and an increase of 29 in the number operated.

In the class of larger distilleries there was an increase of 12 in the number registered, but a decrease of 2 in the number operated.

During the fiscal year ended June 30, 1890, there were registered 1,308 distilleries of the smaller class, varying in daily grain capacity from not over 5 to not over 60 bushels each, and of this number 1,170, or 89 + per cent., were operated.

Of the larger distilleries having daily grain capacities varying from 60 to several thousand bushels each, 228 were registered and 227, or 99½ per cent., were operated.

During the fiscal year ended June 30, 1891, of the smaller distilleries 1,378 were registered, and 1,199 or 87+ per cent. were operated.

Of the larger distilleries 240 were registered, and 225 or 93+ per cent. were operated.

There were 11 rum distilleries registered and 11 operated, an increase of one over the number reported for the previous fiscal year.

There were 2,420 fruit distilleries registered and 2,384 operated; a decrease of 2,464 in the number registered and of 2,420 in the number operated during the fiscal year.

The total number of grain, molasses, and fruit distilleries registered and operated during the year is 4,049 and 3,819, respectively.

There was a decrease of 2,381 in the number of all kinds of distilleries registered and a decrease of 2,392 in the number of all kinds operated during the fiscal year ended June 30, 1891, as compared with the fiscal year ended June 30, 1890.

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MATERIALS USED FOR THE PRODUCTION OF DISTILLED SPIRITS.

STATEMENT SHOWING THE QUANTITIES OF GRAIN AND OTHER MATERIALS USED IN THE PRODUCTION OF DISTILLED SPIRITS DURING THE FISCAL YEAR ENDED JUNE 30, 1891, BY STATES AND TERRITORIES.

States.	Malt.	Wheat.	Barley.	Rye.	Corn.	Oats.	Mill feed.	Molasses.	Other material.	Total.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Gallons.	Bushels.	Gallons.
Alabama	558	19		45	4,121					4,743
Arkansas	2,054	3		872	20,236					23,218
California	12,071	68,188		20,656			22			100,917
Colorado		50		29	46					130
Connecticut	31,519			52,813	70,326				1,242	155,902
Delaware	29,364	26		673	171,986					203,054
Florida	902,951	16		325,108	7,273,588	230				8,505,871
Georgia	122,741	268		46,548	1,132,895	5,854	8,244			1,316,400
Indiana	832,618	15,282		1,163,976	5,683,932	2,487	20	134,676		7,661,753
Iowa	66,077	236		532,035	64,653	1,763				661,783
Kentucky				10,955	9,490					21,284
Massachusetts	53,104			10,401	504,022			2,195,094		567,514
Michigan	40,768			15,297	380,273	2,516	11			439,507
Minnesota	79,803	613	31	23,065	604,191	117				801,116
Missouri								36,825		36,825
Montana	33,800			50,700	50,700					135,200
New Hampshire	97,382	687		225,040	232,700				8,564	559,403
New Jersey	33,587	1,205	14	37,922	230,632	21	317	267		353,698
North Carolina	279,660	1,571		245,271	1,557,734	865	17,558	232,022		2,102,658
Ohio										10,725
Oregon	202,996	5,649		1,577,626	175,476	764	643			2,023,174
Pennsylvania	1,960	91		22,432	18,718					21,399
South Carolina	25,988	13	35	26,989	229,496		1,670			279,219
Tennessee	51	233	4	12	52,916			1,809		546
Texas	5,559			26,989	52,916					85,581
Virginia	13,581			118,444	3,711					135,736
West Virginia	22,503	2,045	578	46,498	77,673					149,202
Wisconsin										
Total	2,951,547	96,166	692	4,579,888	18,671,536	14,637	28,380	2,610,918	4,836	26,347,641

The average yield per bushel of grain was $\frac{114,178,077}{26,385,401} = 4.32$ + gallons of spirits.

The average yield per gallon of molasses was $\frac{1,784,812}{2,568,171} = .703$ + gallons of rum.

*242,747 gallons of molasses were used in combination with grain for the production of spirits instead of rum; and their equivalent, estimated in bushels of grain, is added to the total grain in determining the yield per bushel of grain.

COMPARATIVE STATEMENT OF MATERIALS USED AND SPIRITS PRODUCED DURING THE LAST TEN FISCAL YEARS.

Year.	Grain used.	Spirits produced.	Molasses used.	Rum produced.
	<i>Bushels.</i>	<i>Gallons.</i>	<i>Gallons.</i>	<i>Gallons.</i>
1882.....	27,459,095	104,149,077	2,121,804	1,704,084
1883.....	18,644,787	72,235,175	2,373,106	1,801,960
1884.....	18,927,982	73,724,581	2,259,536	1,711,158
1885.....	17,865,203	72,834,198	2,719,416	2,081,165
1886.....	19,195,332	78,544,428	2,308,130	1,799,952
1887.....	17,959,565	75,974,376	2,428,783	1,857,223
1888.....	16,122,509	68,288,160	2,519,494	1,891,246
1889.....	20,990,924	87,887,456	1,951,104	1,471,054
1890.....	25,202,901	107,618,120	2,108,538	1,657,808
1891.....	26,347,641	114,178,077	2,368,171	1,784,312
Total.....	208,715,939	855,533,648	23,248,082	17,759,902
Average.....	20,871,593	85,553,364	2,324,808	1,775,996

The quantity of grain used in the production of spirits during the fiscal year ended June 30, 1891 (26,347,641 bushels) is an increase of 1,144,740 bushels over the amount used in the preceding fiscal year (25,202,901 bushels) and is 5,476,048 bushels more than the average (20,871,593 bushels) for the last ten years.

The number of gallons of spirits produced from grain during the year (114,178,077 gallons) shows an increase of 6,559,957 gallons over the product (107,618,120 gallons) of the year ended June 30, 1890, and is 28,624,713 gallons more than the average produced (85,553,364 gallons) for the last ten years.

The yield of spirits from each bushel of grain is 4.32+ gallons. The yield for the two preceding years was 4.18+ for 1889 and 4.27+ for 1890.

The quantity of molasses used for the production of rum during the fiscal year (2,368,171 gallons) shows an increase of 169,633 gallons over the quantity used in the previous year (2,198,538 gallons) and is 43,363 gallons more than the average (2,324,808 gallons) for the last ten years.

The quantity of rum distilled from molasses during the fiscal year (1,784,312 gallons) shows an increase of 126,504 gallons over the product of the previous year (1,657,808 gallons) and is 8,316 gallons more than the average product (1,775,996 gallons) for the last ten years.

SUMMARY.

Number of cattle fed at registered grain distilleries in the United States.....	80,593
Total increase in weight of cattle.....pounds..	18,256,794
Average increase in weight of cattle.....do.....	226+
Number of hogs fed at registered grain distilleries in the United States.....	39,655
Total increase in weight of hogs.....pounds..	3,354,956
Average increase in weight of hogs.....do.....	84+
Total number of cattle and hogs fed.....	120,250
Total increase in weight of cattle and hogs.....pounds..	21,611,750
Average increase in weight of cattle and hogs.....do.....	179+

DISTILLED SPIRITS IN THE UNITED STATES OCTOBER 1, 1891.

The quantity of distilled spirits in the United States, except what may be in customs bonded warehouses, on the 1st day of October, 1891, was 152,945,773 gallons, this quantity being distributed as follows:

	<i>Gallons.</i>
In distillery and special bonded warehouses.....	106,539,498
In hands of wholesale liquor dealers.....	14,406,275
In hands of retail liquor dealers.....	32,000,000
Total.....	152,945,773

In making the above computation the average stock of each retail liquor dealer in the United States is estimated at 150 gallons.

* * * * * * *

EXPORTATION OF MANUFACTURED TOBACCO AND SNUFF IN BOND.

The subjoined table shows, as removed for export and unaccounted for July 1, 1890, and June 30, 1891, the quantity in pounds of manufactured tobacco and snuff which had been removed for exportation in bond, and concerning which the proof of exportation required by law had not been furnished prior to the dates therein:

	Pounds.	Pounds.
1. Removed and unaccounted for July 1, 1890:		
Tobacco at 8 cents tax removed under exportation bonds		861, 463½
2. Tobacco at 8 cents removed during year ended June 30, 1891	6, 647, 140½	
Tobacco at 6 cents removed during year ended June 30, 1891	6, 207, 851	
	<u>12, 854, 991½</u>	
Total		<u>13, 716, 454½</u>
3. Exported and accounted for during the year:		
Tobacco at 8 cents under exportation bonds	7, 496, 871½	
Tobacco at 6 cents under exportation bonds	5, 450, 604½	
	<u>12, 947, 476½</u>	
4. Tax paid on deficiencies during the year:		
Tobacco at 8 cents tax	3, 687½	
Tobacco at 6 cents tax	1, 900	
	<u>5, 587½</u>	
Total		<u>12, 953, 063½</u>
5. Remaining unaccounted for at the close of fiscal year ended June 30, 1891:		
Tobacco at 8 cents tax	8, 044½	
Tobacco at 6 cents tax	755, 346½	
	<u>763, 391</u>	
Total		<u>13, 716, 454½</u>

EXPORTATION OF CIGARS AND CIGARETTES IN BOND DURING THE FISCAL YEAR ENDED JUNE 30, 1891.

Cigars and cigarettes.	Cigars at \$3 per 1,000.	Cigarettes at 50 cents per 1,000.
1. Removed and unaccounted for July 1, 1890	550, 175	14, 550, 000
2. Removed during the year ended June 30, 1891	3, 209, 484	294, 534, 250
Total	<u>3, 759, 659</u>	<u>309, 084, 250</u>
3. Exported and accounted for during the year ended June 30, 1891	3, 498, 559	298, 130, 750
4. Remaining unaccounted for at the close of the fiscal year ended June 30, 1891	261, 100	10, 944, 500
Total	<u>3, 759, 659</u>	<u>309, 084, 250</u>

It appears upon comparing the figures in the foregoing tables with similar tables published in my report for the fiscal year ended June 30, 1890, that there was an increase in the exportations of 1891 over those

of 1890, as to tobacco and cigarettes, and a decrease as to cigars, as follows:

	Increase.	Decrease.
Tobacco..... pounds.....	4,288½	
Cigars..... number.....		40,066
Cigarettes..... do.....	35,224,200	

Neither the increase as to tobacco nor the decrease as to cigars is very great, but the increase as to cigarettes is remarkable and brings the quantity exported during the year ended June 30, 1891, up to nearly 300,000,000. The business of exporting cigarettes has grown during the past ten years as follows:

NUMBER DURING FISCAL YEAR ENDED JUNE 30—

1882..... 64,001,500	1886..... 134,311,180	1890..... 259,310,050
1883..... 68,413,560	1887..... 139,935,300	1891..... 294,534,250
1884..... 86,243,485	1888..... 180,769,800	
1885..... 104,811,420	1889..... 246,679,750	

In the fiscal years 1887 and 1888 the largest production month was March; in the fiscal year 1889, December; in the fiscal year 1890, October; while the greatest production during the fiscal year ended June 30, 1891, occurred in March, the quantity produced during these months being as follows:

	Pounds.
In March, 1887.....	3,568,254
In March, 1888.....	3,940,727
In December, 1888.....	4,181,317
In October, 1889.....	4,072,333
In March, 1891.....	6,723,224

BOUNTY ON SUGAR.

The act of October 1, 1890 (26 Stat., 567), entitled "An act to reduce the revenue and equalize duties on imports, and for other purposes," provides—

That on and after July first, eighteen hundred and ninety-one, and until July first, nineteen hundred and five, there shall be paid, from any moneys in the Treasury not otherwise appropriated, under the provisions of section three thousand six hundred and eighty-nine of the Revised Statutes, to the producer of sugar testing not less than ninety degrees by the polariscope, from beets, sorghum, or sugar cane grown within the United States, or from maple sap produced within the United States, a bounty of two cents per pound; and upon such sugar testing less than ninety degrees by the polariscope, and not less than eighty degrees, a bounty of one and three-fourths cents per pound, under such rules and regulations as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, shall prescribe.

Congress at the last session made the appropriation necessary to carry out the law according to the recommendations made by this office, based upon the best data obtainable.

The act making appropriations for the legislative, executive, and judicial expenses of the Government for the fiscal year ending June 30, 1892, and for other purposes (act of March 3, 1891), authorized the Commissioner to employ not to exceed 12 inspectors, at a salary not

exceeding \$5 per day and necessary expenses, whose duty it should be to inspect sugar upon which a bounty is required to be paid, to aid in ascertaining the amount of bounty due thereon, and to perform such other duties as may be required by the Commissioner of Internal Revenue; and the sum of \$36,000 was appropriated for that purpose.

An increase of \$165,000 was made in the same act in the appropriations for the salaries and expenses of collectors of internal revenue, deputy collectors and clerks over the estimated amount necessary for collecting internal revenue, for the purpose of carrying out the provisions of the law relative to the bounty.

The clerical force in this office was also increased as follows:

1 head of division, at a salary of.	\$2,250	1 clerk, at a salary of.....	\$1,000
1 clerk, at a salary of.....	1,800	1 clerk, at a salary of.....	900
1 clerk, at a salary of.....	1,600	1 messenger, at a salary of.....	840
1 clerk, at a salary of.....	1,400		
1 clerk, at a salary of.....	1,200	Total	10,990

The total additional appropriation made for the fiscal year ending June 30, 1892, on account of sugar bounty was, therefore, \$211,990.

The act making appropriations to supply deficiencies in the appropriation for the fiscal year ending June 30, 1891, and prior years (act of March 3, 1891), also appropriated \$5,000, or so much thereof as may be necessary, for expenses incident to carrying out the provisions of the act of October 1, 1890, relative to the bounty on sugar.

Of this appropriation, the sum of \$4,948.67 has been expended—most of it for polariscopes, chemical supplies, and fitting up laboratories.

The sum expended for weighing and sampling instruments, polariscopes, supplies for laboratories, etc., will not be an annual expense except as far as may be necessary to furnish new instruments or apparatus to replace those injured or worn out.

It should be borne in mind that the Government is obliged to have all the sugar weighed by Government weighers, and to throw all the safeguards and checks around the payment of a bounty of \$10,000,000 requires the same system that is necessary in the collection of a like amount of taxes.

The same oversight is to be taken of factories where sugar is produced upon which bounty is to be claimed, as is taken in the case of tobacco factories, oleomargarine factories, etc., where revenue is collected.

The bounty will be paid from the Treasury to the individual through the same general channel and surrounded by the same checks as where money is collected from individuals and paid into the Treasury.

WHEN THE ACT TOOK EFFECT.

The first question that arose in making arrangements for carrying out the law was as to the time when the provisions of the act relative to bounty went into effect.

The act itself stated that the provisions thereof, relative to the payment of the bounty, should take effect on the 1st day of April, 1891.

The question was submitted to the Attorney-General whether the bounty was payable on maple sugar made on and after April 1, 1891, and before July 1, 1891. It was decided that it was not intended by Congress to make the bounty payable on sugar produced prior to July 1, 1891.

* * * * *

WHO ARE SUGAR-PRODUCERS.

If a planter or farmer sells the cane which he has raised, or the sirup which he has produced, at any period before the manufacture of sugar is completed, he will have no right to the bounty on the completed product. The party purchasing such cane or sirup and making the sugar will be entitled to the bounty upon compliance with the requirements of the regulations.

If, however, the planter or farmer takes his cane or sirup to a sugar factory and has it made into sugar for his own account, retaining ownership and paying to the factory a toll for the manufacture, he is then the sugar-producer and entitled to the bounty.

The central factories which work sirup into sugar, on contract for other parties who produce the sirup and retain ownership, are treated and considered as a part of the sugar factory of the licensed sugar-producer and are subject to the same rules and regulations in regard to notices, books, etc.

SUGAR FROM SUGAR CANE.

The following is the number of persons intending to manufacture sugar from sugar cane during the present fiscal year, under the provisions of the bounty act, and the estimated amount of sugar which they propose to produce, as stated in their applications:

Collection district.	Number of producers.	Estimated production. (Pounds.)
Louisiana.....	700	553, 711, 300
Florida.....	15	3, 588, 500
Texas.....	15	14, 807, 000
Total.....	730	572, 106, 800

Applications disallowed and licenses surrendered, 3.

ACREAGE.

The following is the acreage of sugar cane under cultivation in the United States, as reported by applicants for license:

LOUISIANA.

Number of acres cultivated by applicants.....	194, 976
Number of acres to be purchased by applicants.....	50, 806
Total acreage reported.....	245, 781
Acres of plant cane.....	108, 225
Acres of stubble cane.....	114, 778
Number of acres not classified.....	22, 778
Total.....	245, 781
Acres to be reserved for seed.....	32, 456
Acres to be utilized for sugar production.....	213, 325

MISSISSIPPI.

Number of acres cultivated (one applicant):	
Plant cane.....	15
Stubble cane.....	5
Total.....	20
Nothing to be reserved for seed.	

TEXAS.

Number of acres cultivated by applicants:

Plant cane.....	2,421
Stubble cane.....	4,450
Total.....	6,871
Acres to be reserved for seed.....	1,102
Acres to be utilized for sugar production.....	5,769

FLORIDA.

Number of acres cultivated and purchased by applicants:

Plant cultivated.....	505½
Purchased.....	16
Stubble cultivated.....	521½
Total.....	995½
Acres to be reserved for seed.....	139½
Acres to be utilized for sugar production.....	855½

SUMMARY.

Total acreage under cultivation in the United States as reported.....	253,667½
Acreage to be reserved for seed.....	33,697½
Net acreage for sugar production.....	219,969½

SUGAR FROM BEETS.

The following is a list of producers of sugar from beets who have made application for license, with the number of acres of beets planted and the amount of sugar proposed to be produced as stated in their applications:

UTAH.

Producer.	Location.	Acres planted.	Estimated production. (Pounds.)
Utah Sugar Co.....	Salt Lake City.....	2,000	7,200,000

CALIFORNIA.

Alameda Sugar Co.....	Alvarado.....	1,000	3,000,000
Western Beet Sugar Co.....	Watsonville.....	2,500	8,000,000
Chino Valley Beet Sugar Co.....	Chino.....	2,500	5,000,000

NEBRASKA.

Oxnard Beet Sugar Co.....	Grand Island.....	2,500	3,000,000
Norfolk Beet Sugar Co.....	Norfolk.....	2,200	3,000,000

VIRGINIA.

O. K. Lapham & Co*.....	Staunton.....	20	10,000
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* License issued, but party afterward decided to make no sugar for bounty.

PENNSYLVANIA.

William W. Mills*.....	Ariel, Wayne County.....	24	(†)
Total.....		12,744	29,210,000

* No license issued at date of this report.

† Not stated.

The beet-sugar industry in the continental countries of Europe has grown within recent years to great dimensions, so that now the production of beet sugar in the world exceeds that of cane. The improved methods of manufacture and the protective system established in those countries and the payment of bounties to beet-sugar manufacturers on exporting their product have produced this result.

The bounty granted to the manufacturers of sugar under the act of October 1, 1890, the admission free of duty of beet-sugar machinery until July 1, 1892, and the encouragement given by the Department of Agriculture in the experiments for the benefit of farmers, and the aid given by different States will doubtless have the effect of stimulating the industry in this country.

In 1887 we produced in this country from the sugar beet 600,000 pounds of sugar, in 1888 about 4,000,000 pounds, in 1889 about 6,000,000 pounds. In 1890 three factories in this country (two in California and one in Nebraska) produced about 8,000,000 pounds. Three additional factories have been established during the past year, and it is estimated that their production this year will be about 25,000,000 pounds.

SUGAR FROM SORGHUM.

The following is a list of producers of sugar from sorghum cane who have made application for license, with the number of acres planted and estimated production as given in their applications:

KANSAS.

Producer.	Location.	Acres planted.	Estimated production. (Pounds.)
Pipe & Hamaford.....	North Topeka	1,300	1,000,000
The Parkinson Sugar Co	Fort Scott	1,200	1,000,000
The Medicine Lodge Sugar Works and Refining Co.	Medicine Lodge.....	2,434	500,000

MISSOURI (First District).

Henry Kochs*.....	Ladsonia	26
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MINNESOTA.

Isid H. Kenney	Morristown.....	32
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MICHIGAN (First District).

Daniel Root*.....	Hudson.....	15
Total.....		5,007	2,500,000

* License issued but party proposes to make no sugar for bounty.

Sugar is obtained from sorghum by the same method as from the sugar cane. Its cultivation in this country for sugar-making purposes has been limited.

The quantity of sugar made last year by the applicants for license in Kansas, in which State most of it is made, was 1,132,044 pounds.

The act of March 3, 1891, making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1892, contains the following provision:

That any manufacturer of sugar from sorghum may remove from distillery warehouses to factories used solely for the manufacture of such sugar from sorghum, distilled spirits in bond free of tax, to be used solely in such manufacture of sugar from sorghum; that all distilled spirits removed as herein authorized shall be of an alcoholic strength of not less than one hundred and sixty per centum proof, and may be removed, stored, and used in the manufacture of sugar from sorghum, and when so used may be recovered by redistillation in the sugar factory of such manufacturer under such bonds, rules, and regulations for the protection of the revenue and the accomplishment of the purposes herein expressed as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, may prescribe.

Regulations have been issued by this office governing the withdrawal from distillery warehouses, free of tax, of distilled spirits to be used in the manufacture of sugar from sorghum, pursuant to this provision. The sorghum manufactories have not taken advantage of this provision the present season. The use of alcohol, free of tax, by manufacturers of sugar from sorghum for the purpose of separating the gummy matter from the sorghum juice promises to be of great advantage to this industry. Recent experiments made in this direction by the Department of Agriculture show that the yield of sugar from sorghum cane will be about doubled by the new process.

MAPLE SUGAR.

Number of applications for license by producers of maple sugar received from fourteen States	4, 159
Estimated quantity of maple sugar upon which bounty will be paid, in round numbers	pounds.. 10, 000, 000

A small quantity of sugar will polarize over 90°, estimated at one-twentieth of the production, and probably some will not reach 80° and therefore not be entitled to bounty.

The total annual production in the United States is probably in the neighborhood of 50,000,000 pounds,* but a large majority of producers failed to make application for license the present year.

METHOD EMPLOYED BY SUGAR PRODUCERS IN THE PRODUCTION OF SUGAR FROM CANE, BEETS, AND SORGHUM.

I.—CANE.

1. Louisiana. (Including one applicant in Mississippi.)

Diffusion and vacuum pan	6
Vacuum pan	174
Open kettle and steam train	378
Producers who ship their sirup or cane to other producers to be made into sugar	142
Total	700

2. Florida.

Vacuum pan	1
Evaporating pan	6
Open kettle	8
Total	15

* The estimate of the Bureau of Statistics of the production for 1890 is 56,000,000 pounds.

3. Texas.

Diffusion and vacuum pan	3
Vacuum pan	2
Open kettle and steam train	10
Total	15

II.—BEETS.

4. California, Nebraska, Utah, and Virginia.

Diffusion and vacuum pan	7
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III.—SORGHUM.

5. Kansas, Michigan, Minnesota, and Missouri.

Diffusion and vacuum pan	3
Vacuum pan	1
Steam train	2
Total	6

NUMBER OF SUGAR PRODUCERS IN THE UNITED STATES WHO HAVE MADE APPLICATION FOR LICENSE TO MANUFACTURE SUGAR DURING THE PRESENT FISCAL YEAR, UNDER THE PROVISIONS OF THE ACT OF OCTOBER 1, 1890, ARRANGED ACCORDING TO STATES.

States.	Maple.	Sugar cane.	Beets.	Sorghum.
Maine	2			
New Hampshire	132			
Vermont	2, 525			
Massachusetts	13			
New York	856			
Pennsylvania	188		1	
Maryland	88			
Virginia			1	
West Virginia	16			
Ohio	224			
Illinois	2			
Michigan	87			1
Minnesota	5			1
Iowa	3			
Wisconsin	8			
Missouri				1
Kansas				3
Nebraska			2	
Utah			1	
California			3	
Florida		15		
Louisiana		702		
Texas		16		
Mississippi		1		
Total	4, 159	733	8	6

Total number of applicants in twenty-four States 4, 906

SUMMARY.

	Number of sugar producers who have applied for license.	Producers' statement of estimated production (pounds).
Sugar cane	733	572, 403, 380
Beets	8	29, 210, 000
Sorghum	6	2, 513, 000
Maple	4, 159	9, 250, 000
Total	4, 906	613, 376, 380

The above estimate of production was made by the producers early in the season, and is considerably in excess of what may be expected. In making their estimate for the year the producers naturally placed their figures high. It is what they hoped to make if all conditions were favorable. The production in Louisiana last year, which was larger than usual, was 436,056,926 pounds, as reported by applicants for license, and the prevalent opinion is that the coming crop will not be any larger.

The production this year by licensed producers will probably not be in excess of the following estimate:

	Pounds.
Cane sugar:	
Louisiana	450,000,000
Texas	12,000,000
Florida	3,000,000
	465,000,000
Beet sugar	25,000,000
Sorghum	2,000,000
Maple	10,000,000
Total estimated production	502,000,000

Estimating that the beet and sorghum sugar will test 90° or over, by the polariscope, and be entitled to the bounty of 2 cents per pound, and that two-thirds of the cane sugar will test 90° and over, and one-third between 80° and 90°, and that one-twentieth of the maple sugar will test 90° and over and the rest between 80° and 90°, the amount of bounty to be paid for the production of the year ending June 30, 1892, will be as follows:

ESTIMATE OF BOUNTY TO BE PAID.

On cane sugar	\$8,912,500
On beet sugar	500,000
On sorghum sugar	40,000
On maple sugar	176,250
Total	\$9,628,750

STATE BOUNTIES.

In Kansas the State pays a bounty of three-fourths of a cent a pound on sugar made from beets, sorghum, or other sugar-yielding cane or plants grown in the State; the sugar to polarize at least 90°, the amount having been reduced from 2 cents a pound by a recent act (act of March 4, 1891). The law provides that the expenses of branding the packages and of making the analysis shall be paid by the persons receiving the bounty. All property of sugar factories is exempt from taxation until 1895.

In Utah the Territorial law (act of March 12, 1890) gives a bounty of 1 cent a pound for the years 1890 and 1891 on sugar made from sorghum, beets, or other sugar-bearing plants grown in Utah; not more than \$15,000 to be drawn each year. No bounty shall be paid upon sugar unless the corporation, firm, or person claiming it shall have first erected a plant for its manufacture, costing not less than \$200,000, and having a capacity of manufacturing 15 tons of sugar per day.

The claimants for bounty are required to pay the cost of carrying out the law.

The State of Nebraska, by the act of legislature of March 19, 1889, "An act to provide for the encouragement of the manufacture of sugar

and paying a bounty therefor," authorized the payment of a bounty of 1 cent per pound upon sugar made from beets, sorghum, or other sugar-yielding cane or plants, but the law was repealed by the legislature of 1891.

RECOMMENDATION AS TO AMENDMENT OF THE LAW.

The law makes no provision for transferring a license, and no provision for issuing a license upon papers filed after the 1st of July of each year.

A case of this kind arose: A firm filed a notice and gave the required bond prior to the 1st of July, and a license was duly issued. Subsequently, after the 1st of July, the firm was dissolved, one member retiring, and a new member took his place. The question arose whether the new firm would be entitled to the bounty upon giving a new notice and filing a new bond. This office held that there was no authority to issue a license to the new firm; that the business must be continued in the name of the old firm and the bounty paid to it; that members of the old firm and the sureties on their bond must sign papers to be filed in this office consenting to this, and continue their liability. Such contracts may be made by the parties between themselves as to indemnity, disposition of the bounty, etc., as they consider necessary for their own protection.

I recommend that the law be amended so as to provide for the transfer of a license or the issuing of a new license to successors or legal representatives, in case of the death of a party who has obtained a license or a change of firm or transfer of business occurring after the 1st of July and after a license has been issued.

CONSUMPTION OF SUGAR IN THE UNITED STATES.

This country is a large consumer of sugar, the people using more per capita than those of any other country, except England.

In the last fiscal year we imported 3,483,477,222 pounds of sugar of the value of \$105,728,216, and produced 512,261,530 pounds.

Of the amount imported 661,448,057 pounds were beet sugar of the value of \$18,318,269, and 2,822,029,165 pounds cane sugar of the value of \$87,409,947.

The amount of sugar produced in the United States is about one-eighth of the amount consumed.

SUGAR STATISTICS.

1. Amount of duty paid on sugar imported into this country during the year ending June 30, 1890	\$53,902,107.55
2. Amount of duty paid on sugar for nine months ending March 31, 1891	32,247,377.03
3. Amount of sugar imported into this country during the year ending June 30, 1891:	
Dutiable sugar for nine months ending March 31, 1891	1,835,114,103
Free sugar under the Hawaiian treaty for the same period	232,594,890
Total up to March 31, 1891	2,067,709,053
Dutiable sugar for three months ending June 30, 1891	4,033,171
Free sugar for the same period under the new tariff	1,332,077,572
Under the Hawaiian treaty	79,657,426
Total	3,483,477,222
4. Total amount of cane sugar imported into this country during the fiscal year ending June 30, 1891	2,822,029,165
Of beet sugar for the same period	661,448,057
Total	3,483,477,222

5. VALUE OF THE SUGAR IMPORTED INTO THIS COUNTRY DURING THE FISCAL YEAR
ENDING JUNE 30, 1891.

	Pounds.	Value.
Free of duty, beet.....	323,056,481	\$8,870,309
Free of duty, cane and other.....	1,009,021,091	31,682,263
Free of duty, Hawaiian.....	312,252,116	13,152,562
Dutiable, beet.....	335,907,899	9,361,968
Dutiable, cane and other.....	1,498,962,006	42,490,253
Dutiable, above No. 16 Dutch standard, beet.....	2,433,677	85,992
Dutiable, above No. 16 Dutch standard, cane.....	1,579,494	65,926
Dutiable, all other.....	183,268	9,943
Total.....	3,483,477,222	105,728,216
Value of cane sugar.....		87,409,947
Value of beet sugar.....		18,318,269
Total.....		105,728,216

STATEMENT SHOWING THE QUANTITIES AND VALUES OF SUGAR (FREE AND DUTIA-
BLE) IMPORTED INTO THE UNITED STATES DURING THE YEAR ENDING JUNE 30,
1891, AND THE COUNTRIES FROM WHICH IMPORTED.

Countries.	Pounds.	Value.
Cuba.....	1,430,565,107	\$45,039,487
Germany.....	464,232,536	12,976,842
British West Indies.....	323,284,557	8,730,993
Hawaiian Islands.....	312,252,316	13,152,562
Brazil.....	203,821,689	5,141,123
British Guiana.....	160,521,132	4,896,072
Austria-Hungary.....	149,328,304	3,958,002
Dutch East Indies.....	136,330,103	3,492,136
Philippine Islands.....	92,610,118	2,121,320
Porto Rico.....	80,013,652	2,416,403
Spain.....	40,889,124	1,282,631
Belgium.....	36,242,626	1,065,469
Great Britain and Ireland.....	14,733,253	452,213
Danish West Indies.....	7,069,887	220,530
Netherlands.....	6,804,549	188,134
Dutch Guiana.....	4,125,850	129,458
British Possessions in Africa and adjacent islands.....	3,318,235	63,180
China.....	2,347,341	84,141
France.....	2,243,406	63,001
Nova Scotia, New Brunswick, Prince Edward Island.....	1,461,684	51,066
Salvador.....	1,338,209	49,844
Mexico.....	1,233,485	35,475
Quebec, Ontario, Manitoba, and the Northwest Territory.....	1,209,920	82,052
Haiti.....	1,090,568	32,096
French West Indies.....	745,706	9,030
British Honduras.....	279,635	7,617
British Columbia.....	237,825	10,995
Ecuador.....	49,750	2,794
Nicaragua.....	46,144	1,187
All other countries.....	50,520	1,524
Total.....	3,483,477,222	105,728,216

7. AMOUNT OF SUGAR EXPORTED FROM THE UNITED STATES DURING THE FISCAL
YEAR ENDING JUNE 30, 1891.

	Pounds.
Dutiable sugar, not above No. 13 Dutch standard.....	4,505,137
Dutiable sugar, above No. 13 and not above 20 Dutch standard.....	11,166
Dutiable sugar, above No. 20 Dutch standard.....	1,340
Total dutiable sugar.....	4,517,643
Domestic sugar, brown.....	204,824
Refined sugar.....	108,238,620
Total.....	112,951,117

8. STATEMENT SHOWING THE QUANTITY OF SUGAR IMPORTED INTO THE UNITED STATES DURING THE LAST FIVE YEARS.

Pounds.		Pounds.	
Year ending June 30—		Year ending June 30, 1890—	
1887	3, 136, 443, 240	1890	2, 934, 011, 560
1888	2, 700, 284, 282	1891	3, 483, 477, 222
1889	2, 762, 202, 967		

9. AMOUNT OF SUGAR PRODUCED IN THE UNITED STATES DURING THE FISCAL YEAR ENDING JUNE 30, 1891.

[This information is compiled from statements made by the sugar producers in their applications for licenses so far as relates to cane, beet, and sorghum sugar. The estimate of maple-sugar production is made by the Bureau of Statistics.*]

Pounds.		Pounds.	
Cane:		Sorghum:	
Louisiana	438, 056, 926	Kansas	1, 132, 044
Texas	10, 139, 833	Maple	56, 000, 000
Florida	940, 950		
Beet:		Total	512, 261, 530
California	7, 121, 777		
Nebraska	850, 000		

10. QUANTITY OF SUGAR CONSUMED IN THIS COUNTRY DURING THE FISCAL YEAR ENDING JUNE 30, 1891, AND NUMBER OF POUNDS PER CAPITA.†

	Pounds.
Amount of sugar imported	3, 483, 477, 222
Amount manufactured from imported molasses (estimated)	63, 703, 380
Amount of domestic production	512, 261, 530
Total	4, 059, 442, 113
Amount of sugar exported	112, 951, 117
Amount consumed	3, 946, 490, 995
Amount consumed per capita	62.64

11. SUGAR PRODUCTION OF THE WORLD, 1889-'90.‡

[Estimates of M. Licht.]

BEET SUGAR.

Countries.	Production.	Countries.	Production.
	Pounds.		Pounds.
Germany	2, 787, 952, 592	Belgium	488, 274, 808
Austria-Hungary	1, 060, 235, 759	Other European countries	176, 368, 000
France	1, 737, 200, 549		
Russia	1, 006, 865, 071	Total production of beet	
Holland	123, 045, 340	sugar in Europe	7, 979, 942, 119

The consumption per capita for the past five years is given as follows:

	Pounds.		Pounds.
1886	52.55	1889	52.64
1887	53.11	1890	54.56
1888	54.23		

CANE SUGAR.

Countries.	Production.	Countries.	Production.
	Pounds.		Pounds.
Cuba	1, 183, 072, 135	Mauritius	273, 337, 331
Puerto Rico	131, 469, 116	Réunion	80, 182, 325
Trinidad	105, 534, 202	Jamaica	66, 138, 000
Barbados	156, 907, 996	Minor Antilles	61, 728, 800
Martinique	79, 414, 101	Louisiana	282, 188, 800
Guadeloupe	104, 778, 024	Peru	66, 138, 000
Demerara	255, 084, 924	Egypt	77, 161, 000
Brazil	330, 690, 000	Sandwich Islands	275, 575, 000
Java	731, 818, 175		
Philippine Islands	256, 119, 405	Total production of cane sugar	4, 518, 248, 334

Total production of the world 12,498,090,453 pounds.

* Statistical Abstract of the United States, 1890, p. 206.

† NOTE.—Willet & Gray, in their Weekly Statistical Sugar Trade Journal of January 8, 1891, give total consumption of sugar in the United States in the year 1890 as 1,522,731 tons, being an increase of 83,030 tons over 1889.

‡ Prepared by the statistician of the Agricultural Department from Licht's Monthly Reports, Magdeburg standard authority for European countries.

12. CONSUMPTION OF SUGAR PER CAPITA OF POPULATION, 1889-'90.

[Estimates of M. Licht.]

Countries.	Consumption.	Countries.	Consumption.
	<i>Pounds.</i>		<i>Pounds.</i>
Germany	22.9	Spain	9.1
Austria	16.1	Portugal and Madeira	12.5
France	28.5	England	77.8
Russia	9.8	Bulgaria	4.1
Holland	25.0	Greece	10.3
Belgium	21.3	Servia	8.7
Denmark	39.0	Turkey	6.4
Sweden and Norway	21.9	Switzerland	32.4
Italy	8.0	All Europe	21.9
Roumania	5.1	North America	53.5

13. PRINCIPAL SUGAR CROPS OF THE WORLD, IN TONS OF 2240 LBS.*

Countries.	1891-'92.	1890-'91.	1889-'90.	1888-'89.	1887-'88.	1886-'87.	1885-'86.
Cuba	800,000	798,000	645,000	526,000	630,300	610,100	705,400
Puerto Rico	50,000	35,000	55,000	55,000	60,000	85,000	64,000
Trinidad	55,000	48,000	60,000	60,000	60,000	69,000	49,200
Barbadoes	60,000	50,000	85,000	50,000	60,000	65,000	44,000
Jamaica	30,000	25,000	25,000	28,000	30,000	21,000	17,000
Antigua and St. Kitts	35,000	35,000	30,000	25,000	26,000	25,000	25,000
Martinique	30,000	32,000	35,000	38,000	39,000	41,000	33,000
Guadeloupe	45,000	48,000	45,000	45,000	50,000	55,000	37,000
Demerara	115,000	115,000	120,000	108,000	110,000	135,000	111,800
Réunion	35,000	35,000	35,000	25,000	32,000	32,000	35,000
Mauritius	125,000	130,000	125,000	132,000	120,000	101,800	114,200
Java	400,000	414,000	333,000	364,000	396,000	363,900	365,900
British India	60,000	60,000	60,000	60,000	55,000	50,000	50,000
Manila, Cebu, Iloilo	140,000	140,000	150,000	210,000	174,000	180,000	186,000
San Domingo, Haiti	20,000	16,000	25,000	20,000	20,000	20,000	18,000
Pernam, Gollanna	150,000	154,000	110,000	128,000	189,000	146,000	96,000
Maceio	40,000	40,000	31,000	44,000	51,000	39,000	12,000
Rio Grande	12,000	12,000	10,000	10,000	12,000	12,000	10,000
Marohn, Bahia	15,000	15,000	5,000	10,000	10,000	10,000	5,000
Peru	40,000	40,000	30,000	30,000	30,000	26,000	27,000
Egypt	40,000	40,000	35,000	35,000	35,000	50,000	65,000
Sandwich Islands	125,000	125,000	120,000	120,000	100,000	95,000	96,500
United States, cane	230,000	225,000	128,000	145,000	158,000	80,000	122,900
Total cane	2,652,000	2,632,000	2,297,000	2,268,000	2,447,300	2,312,800	2,280,900
Total beet, Europe	3,800,000	3,632,000	3,627,967	2,785,844	2,481,950	2,750,206	2,229,973
Total beet, United States	13,000	10,000	.....	.....	.....	.....	.....
Cane and beet	6,465,000	6,274,000	5,924,967	5,053,844	4,929,250	5,063,006	4,519,873

* Willett & Gray's Weekly Statistical Sugar Trade Journal, September 24, 1891. The estimates for the crops of 1890-'91, and for the crop of 1891-'92, are estimates of Willett and Gray obtained from the best sources at their command, which include the principal merchants doing business in the different countries.

† Estimated.

JOHN W. MASON,
Commissioner.

REPORT OF THE CHIEF OF THE BUREAU OF ENGRAVING
AND PRINTING.

TREASURY DEPARTMENT,
BUREAU OF ENGRAVING AND PRINTING,
Washington, D. C., October 16, 1891.

SIR: I have the honor to submit the following report of the operations of this Bureau during the fiscal year 1891:

The result of the year's operations is the largest delivery of securities, stamps, and miscellaneous work of any year during a period of 14 years. There were completed and delivered during the year 11,233,999 sheets of United States notes, Treasury notes, gold and silver certificates, bonds, and national-bank notes, having a face value of \$308,065,930; 33,500,696 sheets of internal revenue and customs stamps containing 927,934,984 stamps, and 1,655,686 sheets of drafts, checks, certificates, etc., besides a large amount of miscellaneous work for the various departments of the Government. There were also received from the Commissioner of Internal Revenue, and returned to him after being imprinted with the words "Act of March 1, 1890," 723,663 sheets containing 24,522,669 stamps for tobacco and snuff.

When the estimates for this year's work were submitted in October, 1889, it was anticipated that the deliveries would be nearly 15 per cent. greater than for the year 1890 and nearly 8 per cent. greater than for 1889 in which were made the largest deliveries from 1877 to that time. The result shows that the deliveries are 27 per cent. greater than those for 1890 and 18 per cent. greater than those for 1889. This large amount of work has not been accomplished without extra effort on the part of nearly every one connected with the establishment. During the greater part of the year it was necessary to work the plate printers and other employes connected with their work, constituting the largest part of the force of the Bureau, $2\frac{1}{2}$ hours, and from March 19 to May 31, 1891, $3\frac{1}{2}$ hours beyond the regular hours daily, commencing work during this latter period at 7 a. m. and closing at 6.30 p. m.

During the spring of 1891 the demand for small notes, under the Act of July 14, 1890, and the Act of August 4, 1886, was so great that, taken in connection with the steadily increasing demand for internal revenue stamps, it became apparent that the facilities of the Bureau, even with the additional space which would be afforded by the new wing when completed, would not be sufficient for the execution of the work within the regular hours. It became necessary, therefore, to devise some method of performing the work that would enable the Bureau to do this. After a very full and careful examination into the matter I became satisfied that the method of printing internal revenue stamps from steel plates engraved in relief, while affording ample protection to the Government, would enable me to do the printing more rapidly, and would thus secure the prompt filling of orders without the necessity of working overtime. I accordingly recommended that the internal revenue stamps known as "strip tobacco stamps," of denominations from 1 ounce to 16 ounces inclusive, be executed by this method, and, upon submitting samples of this work to the Secretary and to the Commissioner of Internal Revenue, they were approved, and a large quantity of the stamps of the denominations of 2 ounce and 4 ounce has been printed by this method, delivered to, and issued by the Commissioner. As rapidly as the engraving of the other denominations of strip tobacco stamps can be finished they will be printed by that method.

also. It is estimated that the difference in cost between the two methods will result in a saving of \$156,941 a year.

Work on the addition to the building, recently authorized by Congress, was commenced March 19, 1891, and was pushed forward as rapidly as the weather would permit. The first part of the building was completed and turned over to me July 1, 1891, and the entire building was completed and turned over to me August 29, 1891. As rapidly as portions of the building were turned over I had new presses placed therein, and there are now in operation in the new wing 126 hand presses. Since I assumed charge of the Bureau (July 1, 1889) I have added 149 hand presses to its plant. With these additional presses, and the relief afforded by the change to relief printing on the tobacco stamps, I am now able to do all the work required within the regular hours, and the force of the Bureau has, since October 1, 1891, been working but eight hours daily.

The large increase in the work of the Bureau has necessitated a corresponding increase in its force. The number of employés has increased from 1,074 at the close of 1890 to 1,246 at the close of 1891, an increase of 16 per cent. The principal increase was in plate printers and assistants, there having been 60 printers and 61 assistants employed during the year.

The financial statement for the year is as follows:

Appropriations for the year:	
Salaries	\$17,450.00
Compensation of employés	370,000.00
Plate printing	525,000.00
Materials and miscellaneous expenses	178,000.00
Total	1,090,450.00
Repayments were made to credit of these appropriations on account of engraving and printing the Treasury notes and of materials furnished the several departments, divided as follows:	
Salaries	\$1,015.30
Compensation of employés	55,740.64
Plate printing	81,059.25
Materials and miscellaneous expenses	39,434.06
	\$177,249.25
Aggregate available	1,267,699.25
Expenditures during the year:	
Salaries	17,908.68
Compensation of employés	425,533.95
Plate printing	605,483.73
Materials and miscellaneous expenses	217,036.93
Total	1,265,963.29
Unexpended balances:	
Salaries	1,256.62
Compensation of employés	206.69
Plate printing	575.52
Materials and miscellaneous expenses	357.13
Total	2,495.96

The expenditures of 1891, as compared with those of 1890, show an increase of 25 per cent., while the increase in the amount of work delivered is 27 per cent. There was added to the plant of the Bureau during the year new machinery to the value of \$12,257.54.

I desire to earnestly renew my recommendation that an appropriation be obtained from Congress for the erection of an outbuilding for

the accommodation of the Bureau's ink mills, laundry, carpenter shop, stable, and for storage. The necessity for this building has been so often shown in the annual reports of this Bureau and in communications to Congress that it is hardly necessary to repeat it here. I also beg to call attention to the great need of an appropriation for painting the old portion of the Bureau building, both the woodwork and the brickwork. The building has not been painted for 10 years, and the woodwork is now in such a condition that unless it is covered with a fresh coat of paint it will rot from exposure to the weather.

The result of the year's operations, as shown above, is especially gratifying when the fact is considered that there were many difficulties to contend with; and I must acknowledge here the uniform courtesy and cordial support I have received from yourself and your Assistant Secretaries. My thanks are also due to the subordinate officers of the Bureau for faithfulness in the discharge of their several duties.

Respectfully submitted.

WM. M. MEREDITH,
Chief of Bureau.

Hon. CHARLES FOSTER,
Secretary of the Treasury.

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REPORT OF THE FIRST COMPTROLLER.

TREASURY DEPARTMENT,
FIRST COMPTROLLER'S OFFICE,
Washington, October 1, 1891.

SIR: In compliance with the request contained in your letter of September 2, 1891, I have the honor to submit the following report of the business transacted in this office during the fiscal year ending June 30, 1891.

* * * * *

SALARIES OF DISTRICT JUDGES.

By the act of February 24, 1891 (26 stat., 783), the salaries of the several judges of the district courts, after the date of the passage of the act, was fixed at the rate of \$5,000 per annum. Congress, however, failed to make the proper appropriation for the remainder of the fiscal year 1891, and as a consequence the judges could not be paid for the period commencing February 24, 1891, and ending June 30 of the same year, at the new rate. The attention of Congress should be invited to the subject, to the end that the proper appropriation may be made.

* * * * *

I have the honor to be, very respectfully,

A. C. MATTHEWS,
Comptroller.

The SECRETARY OF THE TREASURY.

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REPORT OF THE COMMISSIONER OF CUSTOMS.

TREASURY DEPARTMENT,
OFFICE OF COMMISSIONER OF CUSTOMS,
Washington, D. C., October 17, 1891.

SIR: I have the honor to submit herewith, for your information, a statement of the business of this office for the fiscal year ending June 30, 1891.

Auditor's statements on hand July 1, 1890.....	249	
Auditor's statements received.....	6,278	
		6,527
Auditor's statements examined and passed.....	6,135	
Auditor's statements cancelled.....	5	
		6,140
Auditor's statements on hand June 30, 1891.....		387
Accounts on hand July 1, 1890.....	532	
Accounts received from First Auditor.....	15,465	
		15,997
Accounts adjusted.....	15,038	
Accounts returned to Auditor.....	4	
		15,042
Accounts on hand June 30, 1891.....		955
Estimates received and examined.....		2,568
Requisitions issued.....		2,568
Amount involved in requisitions.....	\$21,582,478.52	
Letters received.....		24,996
Letters written.....		9,926
Letters recorded.....		9,759
Stubs of receipts for duties and fees returned by collectors.....		220,293
Stubs of receipts examined and summarized.....		219,087
Tonnage stubs received and entered.....		13,241
Tonnage stubs examined.....		12,810
Auditor's statements registered.....		6,226
Auditor's statements recorded.....		5,768
Auditor's statements checked by stubs.....		2,894
Appointments registered.....		3,651
Oaths examined and registered.....		2,770
Official bonds examined and approved.....		52
Commissions transmitted.....		50
Papers filed, noted, and referred.....		18,148
Number of attorneys registered.....		678
Average number of clerks employed.....		28

There was paid into the Treasury from sources the accounts relating to which are settled in this office.

Customs (duties).....	\$219,001,418.83
Customs (tonnage).....	520,333.46
Customs (unclaimed merchandise).....	452.94
Labor, drayage, and storage.....	69,184.13
Services of United States officers.....	291,536.16
Weighing fees.....	74,700.85
Mileage of examiners.....	4,758.23
Customs officers' fees.....	114,878.39
Fines, penalties, and forfeitures.....	134,023.27
Emolument fees.....	277,040.79
Immigrant fund.....	292,271.00

Proceeds of Government property sold.....	\$2,479.65
Deceased passengers.....	1,000.00
Rent.....	20,778.86
Interest on debts due United States.....	94.54
	<hr/>
	220,804,951.10

And there was paid out of the Treasury on the following accounts:

Expenses of collecting the revenue from customs.....	\$6,964,248.71
Debentures and drawbacks.....	4,926,337.17
Expenses of Revenue-Cutter Service.....	886,166.26
Excess of deposits.....	7,011,071.62
Construction and maintenance of lights.....	2,764,986.22
Expenses of regulating immigration.....	170,597.88
Marine-Hospital Service.....	536,845.21
Life-Saving Service.....	998,396.46
Compensation in lieu of moiety.....	12,900.14
Salaries agents seal fisheries, Alaska.....	15,396.83
Statistics relating to fur industries of Alaska.....	6,080.00
Proposals for lease of fur-seal islands.....	641.04
Protecting salmon fisheries.....	1,500.00
Expenses of local appraisers at quarterly meetings.....	1,404.38
Quarantine service.....	50,604.11
Quarantine stations for neat cattle.....	12,266.24
Enforcement of Chinese exclusion act.....	48,949.02
Enforcement of alien contract labor law.....	61,500.00
Detection and prevention of frauds on customs revenue.....	15,995.51
Revenue steamers.....	124,883.72
Supply steamers for Atlantic and Gulf coasts.....	80,506.28
Steam tenders for light-house districts.....	164,924.95
Interest on tonnage dues illegally exacted.....	1,452.25
Proceeds of goods seized and sold.....	1,054.23
Unclaimed merchandise.....	4,776.19
Refunding money erroneously received and covered into Treasury.....	403.75
Refunding penalties and charges erroneously exacted.....	25,198.19
Services to American vessels.....	25,978.16
Salaries shipping service.....	59,543.48
Extra pay to officers and men in Mexican war.....	96.00
Admission of foreign goods to Columbian Exposition.....	1,300.00
Payment to Susannah George.....	365.15
Reimbursement to crew of life-saving station, Muskeget, Mass.....	170.65
Refund to Aberdeen Packing Company.....	75.00
Refund to R. A. Ballard.....	10.00
Refund to J. W. Breden.....	15.00
Refund of duties to St. Mary's Church, Harford County, Md.....	126.82
Refund to George Hazel.....	154.51
Refund to J. L. Somers.....	200.00
Relief of A. K. Delaney.....	10.00
	<hr/>
	24,977,131.13

In presenting this annual report I can only say that the experience of each year demonstrates that the recommendations heretofore made should have some attention paid to them. The principal ones are:

A permanent annual appropriation of, say, \$7,500,000 for expenses of collecting the revenue from customs in lieu of the present one of \$5,500,000, with an addition of the collections from customs sources as enumerated in section 3687 Revised Statutes; the modification of the present law so that the miscellaneous collections now belonging to that appropriation be covered into the Treasury as a part of the general fund; the fixing of specific salaries as the total compensation of collectors of customs and of surveyors acting as such; the modification of the laws relating to appointment and salary of subordinate customs officers, so that there can be no doubt of any one of them being an offi-

cer of the United States; and abolishing their distinctive names, classing them all as customs officers, with power to the principal officer of the district to detail them to any duty relating to customs or navigation within his district.

The transfer from the Special Agents Division to this Bureau of the Immediate Transportation accounts, together with the increase in number of ports and importations, has made necessary the employment of details to keep the work up to the requirements of the office. In many cases these details are not familiar with the duties, and such work is expensive and unsatisfactory. I therefore recommend that Congress be requested to provide for a sufficient clerical force to perform the duties without the delay that is at present unavoidable.

I inclose herewith the statements (A) of transactions in bonded goods as shown by the adjusted accounts; (B) comparative statement of transactions under the immediate transportation system for the years 1881 and 1891.

I am, very respectfully, your obedient servant,

SAML. V. HOLLIDAY,
Commissioner of Customs.

The SECRETARY OF THE TREASURY.

REPORT OF THE THIRD AUDITOR.

PENSION DIVISION.

Exhibit A.—REPORT OF THE OPERATIONS OF THE ARMY PENSION DIVISION, THIRD AUDITOR'S OFFICE, FOR THE FISCAL YEAR ENDING JUNE 30, 1891.

Accounts of pension agents, and amounts involved, including supplemental settlements; also special settlements, accounts for lost checks, reclaimed checks, examining surgeon's fees, attorney's fees, etc., on hand July 1, 1890, received and audited during the fiscal year, and remaining on hand June 30, 1891.

	Army pensions.		Arrears.		Special.		Supplemental.		Total.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
On hand July 1, 1890.....	74	\$28,099,500.66	228	\$2,479.62	.....	.....	.....	.....	302	\$28,101,980.28
Received during the fiscal year.....	222	110,495,965.59	216	17,317.47	1,250	\$136,792.49	84	\$42,183.27	1,772	110,692,258.82
Total.....	296	138,595,466.25	444	19,797.09	1,250	136,792.49	84	42,183.27	2,074	138,794,239.10
Reported to Second Comptroller.....	195	94,357,988.97	310	11,882.69	1,250	136,792.49	84	42,183.27	1,839	94,548,347.42
Remaining on hand June 30, 1891.....	101	44,237,477.28	134	8,414.40	.....	.....	.....	.....	235	44,245,891.68
Total.....	296	138,595,466.25	444	19,797.09	1,250	136,792.49	84	42,183.27	2,074	138,794,239.10

Number of letters received during fiscal year 1891 6,347
 Number of letters written during fiscal year 1891..... 9,701
 Number of clerks employed during fiscal year 1891..... 47

Exhibit B.—AMOUNT OF ARREARS OF ARMY PENSIONS DISBURSED BY PENSION AGENTS DURING FISCAL YEAR ENDING JUNE 30, 1891, TOGETHER WITH AMOUNT EXPENDED FOR ADJUSTING QUARTERLY PAYMENTS UNDER ACT OF MARCH 3, 1891.

Agency.	Agent.	Arrears of Army pensions.			Adjusting quarterly payments.	Total.
		Invalids.	Widows.	Total.		
Augusta, Me.....	John A. Clark.....	\$84.93	\$607.73	\$692.66	.....	\$692.66
Boston, Mass.....	W. H. Osborne.....	562.07	.....	562.07	.....	562.07
Buffalo, N. Y.....	J. Schenkelberger.....	1,990.83	.....	1,990.83	.....	1,990.83
Chicago, Ill.....	Isaac Clements.....	212.13	.....	212.13	\$1,300.20	1,611.33
Columbus, Ohio.....	J. G. Mitchell.....	1,136.60	552.80	1,688.80	.....	1,688.80
Concord, N. H.....	W. H. D. Cochrane.....	.....	.....	.....	.....	.....
Do.....	Thos. P. Cheney.....	135.00	.....	135.00	.....	135.00
Des Moines, Iowa.....	S. A. Marine.....	.....	.....	.....	.....	.....
Detroit, Mich.....	E. H. Harvey.....	624.06	.....	624.06	.....	624.06
Indianapolis, Ind.....	N. Ensley.....	209.40	729.60	939.00	.....	939.00
Knoxville, Tenn.....	Wm. Rule.....	.....	550.67	550.67	.....	550.67
Louisville, Ky.....	C. J. Walton.....	.....	2,272.61	2,272.61	123.33	2,395.94
Milwaukee, Wis.....	L. E. Pond.....	137.44	.....	137.44	432.00	569.44
New York City, N. Y.....	F. C. Loveland.....	.....	.....	.....	265.00	265.00
Philadelphia, Penn.....	W. H. Schelmire.....	722.27	.....	722.27	.....	722.27
Pittsburg, Pa.....	W. H. Barclay.....	90.40	.....	90.40	.....	90.40
Do.....	H. H. Bengough.....	99.80	1,308.00	1,407.80	570.67	1,978.47
San Francisco, Cal.....	Jno. C. Currier.....	.....	.....	.....	.....	.....
Topeka, Kans.....	B. Kelly.....	179.13	.....	179.13	.....	179.13
Washington, D. C.....	S. L. Willson.....	24.67	.....	24.67	.....	24.67
Total.....	.....	6,208.13	6,021.41	12,229.54	2,700.20	15,019.74

Exhibit F.—COMPARATIVE STATEMENT SHOWING DISBURSEMENTS BY PENSION AGENTS TO PENSIONERS AND EXAMINING SURGEONS DURING FISCAL YEARS 1887, 1888, 1889, 1890, AND 1891, AND ENTIRE EXPENSES OF THE AGENCIES DURING SAID YEARS, INCLUDING SALARIES, CLERK HIRE, RENT, FUEL, LIGHTS, AND CONTINGENT EXPENSES, AND THE AVERAGE COST FOR EACH \$1,000 DISBURSED.

Agency.	1887.			1888.			1889.			1890.			1891.		
	Disburse- ments.	Ex- penses.	Cost for each \$1,000 disbursed.	Disburse- ments.	Ex- penses.	Cost for each \$1,000 disbursed.	Disburse- ments.	Ex- penses.	Cost for each \$1,000 disbursed.	Disburse- ments.	Ex- penses.	Cost for each \$1,000 disbursed.	Disburse- ments.	Ex- penses.	Cost for each \$1,000 disbursed.
Augusta, Me.....	\$2,228,323.07	\$8,421.94	\$3.76	\$2,307,658.05	\$8,598.17	\$3.72	\$2,509,774.06	\$8,898.59	\$3.54	\$2,607,948.26	\$9,061.72	\$3.73	\$2,811,525.18	\$9,884.24	\$3.52
Boston, Mass.....	3,927,350.81	14,265.08	3.62	4,015,098.39	15,285.50	3.80	4,080,210.86	15,432.69	3.30	5,514,271.14	15,035.77	2.73	5,846,635.65	19,030.32	3.26
Buffalo, N. Y.....	4,967,773.97	14,593.75	3.02	4,584,383.46	14,835.32	3.25	4,994,343.43	15,432.38	3.12	5,751,005.00	15,328.22	2.67	6,421,969.35	18,419.78	2.87
Chicago, Ill.....	6,560,744.97	18,837.10	2.82	6,736,781.67	20,817.45	3.09	7,165,562.55	21,200.00	2.96	8,610,294.80	21,098.80	2.51	8,968,292.47	20,750.75	2.43
Columbus, Ohio.....	7,500,772.36	21,602.58	2.82	8,326,933.32	21,699.26	2.61	9,516,330.51	22,319.55	2.35	11,213,645.08	20,177.28	2.33	13,031,400.08	23,487.04	2.57
Concord, N. H.....	7,346,928.81	21,894.46	4.07	8,280,638.14	10,219.71	4.25	9,657,318.82	10,742.60	4.04	2,885,995.19	9,624.64	3.04	9,927,188.30	10,739.67	2.76
Des Moines, Iowa.....	8,323,938.81	15,609.22	2.81	4,794,840.12	13,193.16	2.75	4,963,817.55	14,619.54	2.93	6,333,894.87	15,430.38	3.43	6,868,819.53	18,932.30	3.10
Detroit, Mich.....	8,303,526.92	12,845.51	2.37	4,794,840.12	13,193.16	2.75	4,963,817.55	14,619.54	2.93	6,333,894.87	15,430.38	3.43	6,868,819.53	18,932.30	3.10
Indianapolis, Ind.....	4,148,948.01	11,035.01	2.68	4,488,961.02	13,054.10	2.89	4,488,961.02	13,054.10	2.89	4,488,961.02	13,054.10	2.89	4,488,961.02	13,054.10	2.89
Knoxville, Tenn.....	4,148,948.01	11,035.01	2.68	4,488,961.02	13,054.10	2.89	4,488,961.02	13,054.10	2.89	4,488,961.02	13,054.10	2.89	4,488,961.02	13,054.10	2.89
Lexington, Ky.....	4,148,948.01	11,035.01	2.68	4,488,961.02	13,054.10	2.89	4,488,961.02	13,054.10	2.89	4,488,961.02	13,054.10	2.89	4,488,961.02	13,054.10	2.89
Milwaukee, Wis.....	2,983,809.63	13,422.04	3.30	3,598,716.19	8,348.21	3.29	4,892,007.87	10,059.91	3.08	4,730,845.77	15,576.98	2.70	5,485,015.53	17,181.29	3.14
New York, N. Y.....	3,270,216.28	18,244.85	5.55	3,573,256.42	17,938.50	5.02	4,590,938.07	14,059.91	3.19	5,543,040.45	15,858.61	2.74	5,946,970.58	21,349.09	3.44
Philadelphia, Pa.....	3,210,510.35	15,157.10	3.45	4,158,617.80	14,133.19	3.40	4,070,741.83	15,649.00	4.17	5,102,160.39	15,075.09	2.95	5,688,770.45	22,916.75	4.03
Pittsburg, Pa.....	3,673,097.53	13,180.74	3.59	3,768,200.66	15,430.04	4.16	4,033,812.89	16,325.75	4.05	4,615,135.50	15,681.76	3.40	5,087,207.76	22,630.46	4.42
San Francisco, Cal.....	3,673,097.53	13,180.74	3.59	3,768,200.66	15,430.04	4.16	4,033,812.89	16,325.75	4.05	4,615,135.50	15,681.76	3.40	5,087,207.76	22,630.46	4.42
Topaka, Kan.....	5,850,951.76	11,814.19	2.36	6,539,847.58	10,679.80	2.46	7,233,466.95	17,090.17	2.36	9,448,632.80	18,077.40	2.01	10,703,406.31	23,303.59	2.18
Washington, D. C.....	5,791,013.54	17,012.52	4.49	4,372,583.90	17,617.21	4.03	5,577,263.98	20,876.46	3.76	6,700,056.14	19,919.19	2.94	8,900,410.95	27,175.51	3.02
Total.....	70,440,633.45	243,280.42	3.38	78,416,268.27	263,109.87	3.35	87,277,884.22	22,278,902.29	3.20	104,582,142.29	202,007.35	2.80	116,241,300.55	350,360.14	3.27

* Formerly Syracuse.

REPORT OF THE FIFTH AUDITOR.

TREASURY DEPARTMENT,
FIFTH AUDITOR'S OFFICE,
Washington, D. C., October 30, 1891.

SIR: According to your instruction under date of the 2d ultimo, I have the honor to hereby submit to you the annual report of this office for the fiscal year ended June 30, 1891.

G.—STATEMENT SHOWING THE NUMBER OF SEAMEN SENT TO THE UNITED STATES AND THE AMOUNT PAID AT THE TREASURY FOR PASSAGE FOR THE FISCAL YEAR ENDED JUNE 30, 1891.

Where from.	Number of men.	Amount.	Where from.	Number of men.	Amount.
Acapulco	8	\$212.16	Nassau	21	\$325.00
Amoy	6	50.00	Newcastle (N. S. W.)	2	40.00
Auckland	2	200.00	Osaka and Hiogo	2	40.00
Bombay	3	60.00	Panama	1	57.50
Cadiz	1	10.00	Para	8	380.00
Calao	2	50.00	Pictou	20	200.00
Cape Town	1	20.00	Rio de Janeiro	7	525.00
Cebu	1	8.00	Sagua la Grande	7	70.00
Charlottetown	1	10.00	San José (C. R.)	1	20.00
Chafuegos	4	80.00	San Juan del Norte	8	212.50
Colon	11	433.52	San Juan (P. R.)	2	30.00
Damara	4	50.00	San Juan (C. V. I.)	3	54.50
Fajal	14	160.00	Singapore	2	70.00
Guadeloupe	6	100.00	St. Christopher	1	10.00
Haiti	95	760.00	St. Georges	6	60.00
Hongkong	8	792.80	St. Helena	6	130.00
Honolulu	13	235.00	St. John's	2	30.00
India	2	20.00	St. Pierre	4	40.00
Illoilo	2	40.00	St. Thomas	4	80.00
Iquique	1	45.00	Sydney	3	230.00
Kanagawa	51	3,356.98	Trinidad Island	5	50.00
Kingston (Jamaica)	19	360.00	Vera Cruz	11	250.00
Liverpool	16	160.00	Victoria	23	85.20
Managua	1	52.50	Yarmouth	59	570.00
Martique	2	20.00			
Mexico	1	10.00			
Montevideo	3	60.00	Total	486	10,967.65

REPORT OF THE REGISTER.

TREASURY DEPARTMENT,
REGISTER'S OFFICE,
Washington, October 31, 1891.

SIR: I have the honor to submit the following report of the operations of this Bureau during the fiscal year ending June 30, 1891:

The appropriation under which the work of the fiscal year was performed called for 108 officers and employes, at an expense of \$139,750. Of this appropriation there was spent \$138,785.61, leaving unexpended about \$1,000. The number in each division, and the amount of salaries paid, appear immediately beneath the headings preliminary to the remarks and statements made regarding the work of the several divisions and a complete and consolidated statement of the number and grade of all in the Register's Office, together with a mention of details to other bureaus, is given in the following table:

DISTRIBUTION OF FORCE AND SALARIES FOR THE FISCAL YEAR ENDING JUNE 30, 1891.

Divisions.	Register, \$4,000.	Assistant Register, \$2,250.	Chief of Division, \$2,000.	Class 4, \$1,800.	Class 3, \$1,600.	Class 2, \$1,400.	Class 1, \$1,200.	\$1,000.	\$800.	Messenger, \$340.	Assistant messenger, \$725.	Laborer, \$600.	Number in each division.	Salaries.
Register's and Assistant Register's offices.....	1	1			1		1	1		1	1	20	7, 20	\$11, 562.36
Receipts and expenditures.....			1	0.06	6	3.77	5.08	.26	4.46		2		32.53	40, 491.16
Loans.....			1	4	1.23	2	4		1.40		22	1, 36	15.21	21, 079.64
Notes, coupons, and currency			1	2	7.77	4.23	3.87	.69	19.82	1	2.78	2.39	45.53	51, 544.48
Interest and expenses of loans.....			1	1		1			.28		1		4.28	6, 112.38
Details to other bureaus.....									2.22				2.22	1, 995.37
Total.....	1	1	4	16.96	16	11	13.95	1.95	28.18	1	4	7.95	106.99	138, 783.61
Appropriation.....	1	1	4	17	16	11	14	2	29	1	4	8	108	139, 750.00

RECEIPTS AND EXPENDITURES DIVISION.

(Number representing average force employed, 32.53; cost \$46,491.16.)

CONDITION OF THE UNITED STATES TREASURY, GIVING THE RECEIPTS, EXPENDITURES, AND BALANCE, FISCAL YEAR ENDING JUNE 30, 1891, AS SHOWN BY THE BOOKS OF THE RECEIPTS AND EXPENDITURES DIVISION.

Balance in Treasury June 30, 1890, including \$28,101,644.91 on deposit with the States, under act of June 23, 1836..... \$691, 527, 403.76

NET RECEIPTS.

Receipts during the fiscal year 1891, from—

Customs:

Duties on imports..... \$210, 001, 418.83
 Tonnage dues, support Marine Hospital Service..... 520, 393.46
 Sales of unclaimed merchandise..... 452.94

Internal revenue..... \$210, 522, 205.23
 Sales of public lands..... 145, 686, 249.44
 Miscellaneous..... 4, 029, 535.41

Reimbursement on half cost of increasing water supply and interest June 30, 1891, District of Columbia..... 71, 164.21
 Revenues, District of Columbia..... 2, 853, 897.74
 Sale of bonds of guaranty fund and United States shares various revenues..... 68, 454.81
 Police and firemen's relief fund, District of Columbia..... 12, 182.42
 Tax on circulation, etc., of national banks..... 1, 236, 042.60
 Proceeds of Government property..... 269, 379.05
 Repayment of interest by Pacific railroads..... 823, 904.04
 Sinking fund, Pacific railroads..... 2, 326, 359.37
 Consular fees..... 782, 619.45
 Spanish indemnity fund..... 28, 500.00
 Custom-house fees..... 555, 057.76
 Customs fines, penalties, and forfeitures..... 134, 023.27
 Customs emolument fees..... 277, 040.79
 Assessments on owners for deaths on shipboard..... 1, 000.00
 Marine Hospital tax and relief of sick, disabled, and destitute seamen..... 8, 254.57
 Immigrant fund..... 292, 271.00
 Reimbursement to United States by Cherokee Nation..... 15, 000.00
 Payment by Sioux Nation for right of way, etc..... 15, 335.76
 Interest on Indian trust-fund stocks..... 17, 286.13
 Reimbursement on account of appropriations made to meet interest on non-paying Indian trust-fund stocks..... 3, 161.10
 Indian trust fund..... 28, 440.00
 Proceeds of sales of Indian lands, interest on deferred payments and Indian moneys, proceeds labor, etc..... 602, 545.38
 Revenues, Yellowstone National Park..... 1, 788.80
 Trust fund interest for support of free schools in South Carolina..... 2, 015.61
 Deposits by individuals for expenses of surveying public lands..... 131, 422.80
 Hot Springs, Ark..... 19, 682.00
 Registers' and receivers' fees..... 931, 906.58

REPORT OF THE SECRETARY OF THE TREASURY.

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NET RECEIPTS—continued.

Receipts during the fiscal year 1891, from—
Miscellaneous—Continued.

Amounts received from claim of Wm. Caldwell and Exchange National Bank, Norfolk, Va.	\$2,207.34
Fees on letters patent	1,305,825.81
Work done by Bureau of Engraving and Printing	53,848.21
Profits on coinage, deductions on bullion deposits and assays of ores, etc.	7,701,991.82
Payment by Nashville and Chattanooga R. R. Co.	500,000.00
Tax on seal skins	269,673.88
Reimbursement by national bank redemption agency, and on account of salaries, office Commissioner of Internal Revenue	127,365.83
Sales of ordnance material, powder and projectiles, and small arms	122,608.01
Pay of Navy deposit fund, clothing, etc., and naval hospital fund	1,097,488.89
Sale of condemned vessels	78,037.86
Soldiers' Home, permanent fund	308,648.54
Depredations on public lands	55,905.83
Unenumerated	212,630.54
Issue of gold certificates	63,515,000.00
Issue of silver certificates	84,904,000.00
Issue of United States notes (legal tender)	70,792,000.00
Issue of certificates of deposit	38,560,000.00
Issue of funded loan of 1907	13,750.00
Issue of Treasury notes of 1890	51,852,417.00
Fund for redemption of notes of national banks	63,571,690.75
	\$765,821,305.06

1,457,348,708.82

NET EXPENDITURES.

Customs	24,909,629.16
Internal revenue	16,552,292.50
Diplomatic	2,028,715.26
Treasury	45,217,510.47
Judiciary	6,058,254.76
Interior, civil	15,281,705.34
War Department	48,720,065.01
Navy Department	20,113,896.46
Interior Department:	
Indians	8,527,469.01
Pensions	124,415,951.40
Premium paid on purchase of bonds	10,401,220.61
Interest on the public debt	32,138,264.25
Interest on bonds issued to Pacific railroad companies	5,408,871.12
Redemption of gold certificates	68,001,550.00
Redemption of silver certificates	71,728,566.00
Redemption of United States notes (legal tender)	70,792,000.00
Redemption of fractional currency	3,831.37
Redemption of certificates of deposit	28,050,000.00
Redemption of old demand notes	385.00
Redemption of one-year notes of 1893	480.00
Redemption of two-year notes of 1893	250.00
Redemption of compound-interest notes	3,320.00
Redemption of seven-thirties of 1864 and 1865	1,150.00
Redemption of loan of 1847	300.00
Redemption of loan of July and August, 1861	22,050.00
Redemption of five-twentieths of 1862	150.00
Redemption of loan of 1863	500.00
Redemption of ten-forties of 1864	11,500.00
Redemption of five-twentieths of June, 1864	10,650.00
Redemption of consols of 1865	15,850.00
Redemption of consols of 1867	35,450.00
Redemption of consols of 1868	20,050.00
Redemption of loan of July 12, 1882	66,500.00
Redemption of funded loan of 1881	12,800.00
Redemption of funded loan of 1891	58,146,550.00
Redemption of funded loan of 1907	42,641,250.00
Redemption of refunding certificates	9,940.00
Redemption of bounty-land scrip	100.00
Redemption of national bank notes	23,553,298.50
Redemption of Treasury notes of 1890	1,624,000.00
	731,126,376.22

Balance in Treasury June 30, 1891 726,222,332.60

Included in this balance (\$726,222,332.60) are the following unavailable funds:
Amount due from several States, deposited with them under act of June 23, 1836, viz:

Maine	\$955,808.25
New Hampshire	669,086.79
Vermont	669,086.79
Massachusetts	1,378,173.58
Connecticut	764,670.60
Rhode Island	382,335.30
New York	4,014,520.71
Pennsylvania	2,857,514.78

NET EXPENDITURES—continued.

Amount due from several States, deposited with them under act of June 23, 1836, viz—

Continued.	
New Jersey.....	\$764, 670. 00
Ohio.....	2, 007, 200. 34
Indiana.....	800, 254. 44
Illinois.....	477, 919. 14
Michigan.....	286, 751. 49
Delaware.....	286, 751. 49
Maryland.....	953, 838. 25
Virginia.....	2, 108, 437. 99
North Carolina.....	1, 433, 787. 39
South Carolina.....	1, 051, 422. 09
Georgia.....	1, 051, 422. 09
Alabama.....	609, 080. 70
Louisiana.....	477, 919. 14
Mississippi.....	382, 335. 30
Tennessee.....	1, 433, 787. 39
Kentucky.....	1, 443, 787. 39
Missouri.....	382, 335. 30
Arkansas.....	286, 751. 49
	<hr/>
	\$28, 101, 644. 91

RECAPITULATION.

From the foregoing it appears that on the 30th day of June, 1890, the United States Treasury contained.....	\$601, 527, 403. 75
During the fiscal year there has been received:	
From customs.....	219, 522, 205. 23
From internal revenue.....	145, 680, 249. 44
From issues of gold and silver certificates, legal tenders, certificates of deposit, funded loan of 1907, and Treasury notes of 1890.....	309, 637, 167. 00
From fund for redemption of notes of national banks.....	63, 573, 690. 75
From other sources.....	27, 403, 202. 64
	<hr/>
Total in Treasury and received during year.....	1, 457, 348, 708. 82
	<hr/>
Expenditures for the year, summarized, were:	
Civil and miscellaneous.....	110, 048, 167. 49
War Department, including rivers and harbors.....	48, 720, 065. 01
Navy Department.....	26, 113, 896. 46
Interior Department, including \$124,415,951.46 for pensions.....	132, 943, 420. 41
Premium on bonds redeemed.....	10, 401, 220. 61
Interest on public debt.....	37, 547, 135. 37
Redemptions of gold and silver certificates, legal tenders, and other evidences of public debt.....	365, 852, 470. 87
	<hr/>
Total expended.....	731, 126, 376. 22
	<hr/>
Leaving in Treasury, June 30, 1891, inclusive of \$28,101,644.91 unavailable funds deposited with States.....	726, 222, 332. 60
	<hr/>
	1, 457, 348, 708. 82

The balance of the items, over one hundred in all, are composed of such as gas, coal, type, hardware, lumber, repairs, etc.

The amount of expenses between the years 1835 and 1860 is being calculated, and the schedules are made up, though not yet corrected and compared; but the footings, which are approximately correct, show that these expenses amount to \$650,382.81, to which add \$39,215,074.19 and we have a grand total of \$39,865,457 from 1835 to 1885.

JOHN H. KING,

Chief of Division of Interest and Expenses of Public Loans.

Hon. W. S. ROSECRANS,
Register of the Treasury.

XV.—DATES WHEN EACH ISSUE OF UNITED STATES CURRENCY BEGAN AND CEASED.

Issue.	Began.	Ceased.
Old demand notes.....	Aug. 26, 1861	Mar. 5, 1863
United States notes:		
New issue.....	Apr. 2, 1862	Aug. 16, 1870
Issue of 1869.....	Oct. 10, 1869	June 30, 1877
Issue of 1874.....	July 25, 1874	Nov. 13, 1877
Issue of 1875.....	July 20, 1875	June 20, 1879
Issue of 1878.....	Mar. 4, 1878	May 12, 1884
Issue of 1880.....	Mar. 16, 1880	
1 and 2 year notes of 1863:		
1-year notes.....	Feb. 4, 1864	June 1, 1864
2-year notes.....	Mar. 16, 1864	May 30, 1864
2-year coupon notes.....	Jan. 12, 1864	Apr. 20, 1864
Compound-interest notes.....	June 9, 1864	July 24, 1866
Fractional currency:		
First issue.....	Aug. 21, 1862	Sept. 21, 1866
Second issue.....	Oct. 10, 1863	Feb. 23, 1867
Third issue.....	Dec. 5, 1864	Apr. 16, 1869
Fourth issue.....	July 14, 1869	Feb. 16, 1875
Fifth issue.....	Feb. 26, 1874	Feb. 15, 1876
Gold certificates:		
Act of Mar. 3, 1863.....	Nov. 15, 1865	Dec. 3, 1878
Act of July 12, 1882, series of 1882.....	Oct. 2, 1882	
Series of 1888.....	Nov. 27, 1888	
Silver certificates:		
Series of 1878.....	Apr. 17, 1878	May 22, 1883
Series of 1880.....	May 26, 1880	
Series of 1886.....	Sept. 7, 1886	

REPORT ON IMMIGRATION, BY THE CHIEF OF THE MISCELLANEOUS DIVISION, OFFICE OF THE SECRETARY OF THE TREASURY.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, D. C., July 15, 1891.

SIR: I have the honor to submit a statement showing the receipts and disbursements of the immigrant fund from the date of the act of August 3, 1882, creating the fund, to June 30, 1891; also some tables showing, (1) the number of immigrants who arrived at the several ports during the fiscal year ending June 30, 1891, and the number excluded and returned; (2) the nativity, (3) the destination, and (4) the trades or occupations of all the 516,253 immigrants who arrived during the year.

The statement of receipts and disbursements shows the total amount of per capita tax collected at each port from the passage of the immigration act of August 3, 1882, to June 30, 1891, and the total amount expended in conducting the business at each port for the same period of time, and the balances on hand; also the balances June 30, 1890, for comparison. It will be observed that there was a large accretion of surplus during the year, amounting to \$144,842.20. Over \$134,000 of this sum accumulated at the port of New York, where more than 78 per cent of the immigrants landed, and is mainly attributable to two causes, viz, the increased influx of immigrants, which added largely to the collections of head money, and the reduced cost for the support and care of immigrants under the management of Treasury officials, as compared with the expenses previously incurred for the same purposes by the Commissioners of Emigration of the State of New York.

On June 11, \$125,000 was set aside to meet the expenses in the improvements on Ellis Island, leaving a balance of \$245,332.52, and it is

probable that as much more will be required before the Island can be occupied for immigration purposes.

The experience derived from the first half-year's management of immigration affairs at the port of New York by Treasury officials confirmed the Department in its opinion that joint control by State and Federal authorities was incompatible with the best service. More prompt and harmonious action was evident, and greater economy was certainly assured. The advisability of terminating all existing contracts with State boards and State commissions seemed to be apparent, though the business was being economically conducted by most of the contracting parties.

The following table shows the receipts and expenditures in detail:

STATEMENT SHOWING RECEIPTS AND EXPENDITURES OF THE IMMIGRANT FUND DURING THE PERIOD FROM AUGUST 3, 1882, TO JUNE 30, 1891, AND THE BALANCES ON JUNE 30, 1890 AND 1891.

Ports.	Receipts.	Expenditures.	Balances.	
			1891.	1890.
Alaska.....	\$12.50		\$12.50	\$12.50
Apalachicola.....	5.00		5.00	5.00
Baltimore.....	132,973.00	\$56,726.82	76,246.08	65,804.95
Boston.....	149,690.00	130,896.82	18,799.48	30,237.75
Buffalo.....	38.00		38.00	38.00
Belfast.....	2.00		2.00	2.00
Barnstable.....	176.00		176.00	171.00
Beaufort.....	240.50		240.50	240.50
Brunswick.....	9.00		9.00	
Charleston.....	16.00		16.00	15.00
Chicago.....	51.50		51.50	51.50
Corpus Christi.....	4.50		4.50	4.50
Cape Vincent.....	114.50		114.50	114.50
Detroit.....	382.00		382.00	382.00
Delaware.....	6.00		6.00	6.00
Duluth.....	338.50		338.50	338.50
Edgartown.....	5.50		5.50	5.50
Fairfield.....	12.50		12.50	12.50
Fernandina.....	1.50		1.50	
Galveston.....	2,883.00	2,737.56	145.44	113.94
Genesee.....	21.00		21.00	21.00
Gloucester.....	121.50		121.50	119.50
Huron.....	621.50		621.50	621.00
Jacksonville.....	71.50		71.50	66.00
Key West.....	21,845.50	13,630.10	8,215.40	6,513.39
Marblehead.....	12.00		12.00	12.00
Mobile.....	23.00		23.00	19.50
Michigan.....	50.50		50.50	50.50
Machias.....	5.00		5.00	5.00
New Orleans.....	14,372.50	6,263.65	8,108.85	7,227.49
New York.....	1,649,572.08	1,429,896.38	219,675.70	84,769.42
New London.....	2.50		2.50	2.00
New Bedford.....	2,107.50		2,107.50	1,632.60
New Haven.....	30.00		30.00	30.00
Newport News.....	782.00		782.00	778.00
Norfolk.....	7.50		7.50	5.00
Oswegatchie.....	115.50		115.50	115.50
Oswego.....	2.00		2.00	2.00
Oregon.....	11.00		11.00	11.00
Philadelphia.....	114,631.50	67,383.65	47,247.85	41,271.78
Providence.....	6.00		6.00	6.00
Portland, Me.....	5,767.00	1,876.59	3,890.41	3,648.41
Portland, Oregon.....	130.00		130.00	58.00
Pamlico.....	2.00		2.00	2.00
Pensacola.....	158.50		158.50	141.00
Pearl River.....	20.50		20.50	17.50
Port Townsend.....	70.50		70.50	70.50
Richmond.....	127.50		127.50	127.50
San Francisco.....	38,447.00	16,353.00	22,093.40	20,648.30
San Diego.....	5.50		5.50	5.50
St. Augustine.....	31.00		31.00	24.50
Savannah.....	10.50		10.50	8.50
Salem and Beverly.....	9.00		9.00	9.00
Superior.....	502.50		502.50	502.50
Tampa.....	15.50		15.50	

STATEMENT SHOWING RECEIPTS AND EXPENDITURES OF THE IMMIGRANT FUND, ETC.—Continued.

Ports.	Receipts.	Expenditures.	Balances.	
			1891.	1890.
Tacbe	\$70.50	.....	\$70.50	\$70.50
Wilmington, Del	10.00	.....	10.00	4.00
Wilmington	58.50	.....	58.50	56.50
Total	2,136,815.08	\$1,725,764.97	411,050.11	260,207.91
Less amount expended in the enforcement of the alien contract-labor law, appropriated from the immigrant fund			40,717.59	36,791.23
Less amount set aside July 11 for improvements on Ellis Island			370,332.52	229,410.68
Balance June 30, 1891			245,332.52	

The contracts made with the Pennsylvania Board of Public Charities, the State Board of Lunacy and Charity of Massachusetts, the State Board of Immigration of Maryland, and the Commissioners of Immigration of Portland, Me., each contained a five-year clause similar in all respects to the one quoted, as follows:

And the party of the second part shall provide at the hospitals and other public institutions controlled by the State of Massachusetts suitable accommodations for such alien immigrants as shall become sick, or in distress, or idiotic, or insane, or a public charge for a period not exceeding five years from the time of such immigrants' landing at their port of arrival in Massachusetts.

The Department having determined to change this stipulation in the contracts to one year instead of five, gave official notice, under date of February 11, 1891, to each of the contracting parties above mentioned that from March 1 the said clause in the contract would be so modified, and requested them to signify their consent to the change in writing. Prompt replies accepting the modification desired by the Department were received from all the boards notified except the State Board of Lunacy and Charity of Massachusetts, which, after some delay, requested that the proposed change take place one month later, to which proposition the Department did not consent. The contracts being thus modified a uniform period in which aid might be rendered was established at all ports. Meanwhile the administration of the laws by Treasury officers at New York was constantly growing in favor of the Department, and pending legislation promised to cure some of the existing difficulties which prevented a strict execution of both immigration and alien contract-labor laws.

On March 3, 1891, the act amendatory to the immigration and alien contract-labor laws which was passed late in the second session of the Fifty-first Congress, became effective, and the Department at once proceeded to develop by practical tests at the several ports, through the local officials then in charge, what changes if any would be requisite in the local management and what changes in the regulations and instructions should be made in order to insure a thorough execution of the new law. During the months following immigrants were arriving at all the ports in very large numbers, and it was deemed best to strengthen temporarily the hands of the officials at Boston, Baltimore, and Philadelphia by the appointment of additional inspectors at these ports to assist the State boards, rather than at this time make any change which might, during the busy season, interrupt the prompt dispatch of business. Accordingly contemplated termination of the existing contract system was delayed until June 2, 1891, when the following letter

was addressed to the State Board of Lunacy and Charity of Massachusetts and substantially similar ones to the Pennsylvania Board of Public Charities and the State Board of Immigration of Maryland:

GENTLEMEN: The agreement entered into by the Secretary of the Treasury, party of the first part, and by the State board of lunacy and charity of Massachusetts, the party of the second part, dated December 2, 1882, contains this provision:

"That this contract may be revoked by either party thereto giving to the other party sixty days' notice in writing of their intention to terminate said contract, and when sixty days shall have expired after such notice shall be given this contract shall cease and terminate."

In pursuance of the above provision, I hereby give notice that sixty days after this date, that is to say, on the 31st day of July, 1891, the contract above mentioned will be revoked, cease, and terminate, and thereafter the services of the State board of Lunacy and Charity of Massachusetts will not be required in the local affairs of immigration at the ports in Massachusetts.

This action is taken in view of the immigration act of March 3, 1891, which in section 8 contains the following provision:

"All duties imposed and powers conferred by the second section of the act of August third, eighteen hundred and eighty-two, upon State commissioners, boards, or officers acting under contract with the Secretary of the Treasury shall be performed and exercised, as occasion may arise, by the inspection officers of the United States."

The law evidently contemplates, and an efficient administration of the immigration statutes requires, that the management shall be uniform at all ports.

I take this occasion to assure you that this Department highly appreciates the fidelity with which the Board has discharged the duties devolved upon it under the contract soon to be terminated.

Respectfully, yours,

CHARLES FOSTER,
Secretary.

The most notable events in immigration matters during the past year were the extraordinarily large volume of immigration to the United States, and the general interest manifested by the people during the discussion of the question in Congress, and by the daily press before and after the passage of the act of March 3. The general tendency of feeling was seemingly favorable to a rigid exclusion of the dangerous and undesirable classes.

The alien contract-labor law had not met the anticipations of its most ardent advocates before Congress. Its evasion by persons who desired to import skilled labor, mechanics, or experts at any trade or calling, seemed to be easily accomplished, and convictions for violations of its provisions were rare. A few hundred contract laborers had been detected and returned, but it was generally believed that great numbers, who had been better tutored, escaped detection and passed to their destinations. As a bar to the admission of cheap labor, which was claimed for the act by many of its friends, it proved almost a complete failure, the cheap class of laborers continuing to flow into the country without hindrance, seeking employment after arrival.

The act of March 3, 1891, was intended to cure the defects in both the alien contract-labor law and the immigration law. Four months' experience, to July 1, of its operation at the ports of New York, Boston, Philadelphia, Baltimore, and a few others of the larger ports has established beyond doubt the feasibility of enforcing with reasonable thoroughness its prohibitive features at these ports. There are, however, a number of minor ports on both the Atlantic and Pacific coasts where preventive measures require to be strengthened. An instance of one method of evading the vigilance of the immigration authorities is shown in the case of Holyer Petersen and wife, who arrived at the port of New York about May 20 last, and were, on their

own testimony, adjudged to be polygamists, and were consequently sent back by the vessel which brought them. They returned, however, with a number of other Mormons, arriving at the port of New York on June 29, but did not attempt to land.

On the 2d of July the immigrant inspectors learned that the party had been transferred to another steamer, and were en route for Norfolk, Va., but telegraphic instructions, which were immediately sent to the collector at that port to examine and detain them if found to be polygamists, failed to reach him in time, as the party had landed and started for Utah, via the Norfolk and Western Railroad, the evening before. But it is apparent from information gathered on this subject from immigration officials, and hereafter quoted, that the majority of undesirable and prohibited immigrants have been entering the United States over the northern border, after having landed at Canadian ports.

On April 9 the Department advised the collectors of customs at Portland, Me., Ogdensburg, N. Y., and other ports on the northern border to the effect that it was reported that large numbers of immigrants from European ports were coming to Canadian ports, thence across the border into the United States, in consequence of the additional restrictions imposed by the act of March 3 and the more rigid inspection at the port of New York, and requested them to report whether such statements were true.

On April 13 the collector at Portland, Me., reported that on March 27 the steamship *Carthagenia* arrived at that port with 43 immigrants, having previously landed 100 at Halifax; that on March 30 the steamship *Sarnia* arrived there with 30 immigrants, having previously landed 600 at Halifax; that on April 7 the steamship *Parisian* arrived with 74 immigrants, having landed 1,000 at Halifax; that on April 10 the steamship *Oregon* arrived with 15 immigrants, having landed 494 at Halifax.

The following remarks are quoted from the report of the secretary of the Commissioners of Immigration at Portland, Me., covering the fiscal year ending June 30:

The steamers that make this their landing place bring less than one-sixth of their passengers to this port; the others they land at Halifax, and the great bulk of them do not stop in Canada, but come directly to this country by railroad. More than this, for nearly seven months in the year a great number of steamers enter the St. Lawrence River, bringing a very large number of passengers who seek homes in this country. We think it safe to say that the immigration from this source exceeds that of all other American ports except New York.

Immigrant Inspector F. A. Woodbridge, writing from Newport, Vt., under date of April 16, says:

For the past month alien immigration passing through this port has averaged 400 persons per day. I am not prepared to state that any large proportion of these immigrants come from Europe; the majority of them come from the eastern provinces of Canada, notably the vicinity of Quebec.

We are receiving at this port three carloads of these French Canadians each day, who are en route to the various manufacturing towns in New England, and a large number of them are, in my opinion, under an implied contract to labor.

The recent legislation intended particularly to regulate immigration along the Canadian border is contained in the last paragraph of section 8 of the act of March 3, viz:

That the Secretary of the Treasury may prescribe rules for inspection along the borders of Canada, British Columbia, and Mexico, so as not to obstruct or unnecessarily delay, impede, or annoy passengers in ordinary travel between said countries; *Provided*, That not exceeding one inspector shall be appointed for each customs district, and whose salary shall not exceed twelve hundred dollars per year.

This clause, instead of being in harmony with the general prohibitive features of the act and the ample authority vested in the Secretary to supervise the business of immigration at seaboard ports, restricts him to very narrow limits in prescribing regulations for inspection along the northern and southern borders. If immigration continues over the border in the numbers above reported, it will be impossible for one inspector in each customs district to properly examine them and keep the required record of their number, nativity, etc., and even with the aid of contract-labor inspectors it will be impracticable to satisfactorily examine into the condition of immigrants without to some extent obstructing, delaying, impeding or annoying "passengers in ordinary travel between said countries," especially on railroad trains.

The immigration business continued to be transacted in this division until the second week in July, when it was transferred to the Immigration Bureau created by the seventh section of the act of March 3, 1891, and this report is made to cover only the business of the fiscal year ending June 30, 1891.

J. W. THOMSON,
Chief Miscellaneous Division.

Hon. CHARLES FOSTER,
Secretary of the Treasury.

TABLE 1.—SHOWING THE NUMBER OF IMMIGRANTS INSPECTED AND ADMITTED INTO THE UNITED STATES, AT THE PORTS BELOW, AND THE NUMBER OF THE PROHIBITED CLASSES DISCOVERED AND RETURNED TO THE COUNTRIES WHENCE THEY CAME, DURING THE FISCAL YEAR ENDING JUNE 30, 1891.

Ports of entry.	Number admitted.			Number returned.							
	Males.	Females.	Total.	Convicts.	Insane.	Idiots.	Paupers.	Contract labor-ers.	Leathome or contagious diseases.	Polygamists.	Total.
Baltimore	21,761	18,951	40,712	.....	2	.....	33	.....	.....	.....	35
Boston	16,067	14,672	30,739	.....	1	.....	54	.....	.....	.....	55
Brunswick, Ga.	9	9	18	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	49	16	65	.....	.....	.....	.....	.....	.....	.....	.....
Gloucester, Mass.	4	4	8	.....	.....	.....	.....	.....	.....	.....	.....
Key West	1,850	836	2,686	.....	.....	1	1	.....	.....	.....	2
New Bedford	473	327	800	.....	.....	.....	.....	.....	.....	.....	.....
New Orleans	3,092	1,105	4,197	.....	.....	.....	.....	.....	.....	.....	.....
Newport News	5	4	9	.....	.....	.....	.....	.....	.....	.....	.....
New York	268,113	137,551	405,664	41	33	1	557	111	63	5	811
Portland, Oregon	135	19	154	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	185	71	256	.....	.....	.....	3	.....	.....	.....	3
Philadelphia	15,770	10,028	25,798	.....	.....	108	12	.....	.....	.....	120
San Francisco	3,981	1,153	5,134	.....	.....	.....	.....	.....	.....	.....	.....
Wilmington, Del.	7	4	11	.....	.....	.....	.....	.....	.....	.....	.....
Total	331,503	184,750	516,253	41	36	2	756	123	63	5	1,020

TABLE 2.—SHOWING THE NATIVITY OF IMMIGRANTS ARRIVING AT THE SEVERAL PORTS OF THE UNITED STATES DURING THE FISCAL YEAR ENDING JUNE 30, 1891.

Ports.	Ireland.	England.	Wales.	Scotland.	Germany.	France.	Russia.	Poland.	Switzerland.	Sweden.	Norway.	Belgium.	Holland.	Italy.
New York.....	35,424	24,229	252	4,908	74,382	4,388	33,504	24,256	6,162	29,415	10,932	2,458	4,141	70,776
San Francisco.....	95	810	3	122	260	95	23	.....	10	13	18	6	13	40
Philadelphia.....	5,137	3,702	59	790	5,396	70	1,763	2,348	138	2,225	925	246	15	44
New Orleans.....	6	222	.....	30	145	508	7	.....	28	3	3	28	2	2,900
Baltimore.....	169	378	.....	.....	27,197	3	5,668	.....	29	273	14	.....	.....	7
Boston.....	11,644	6,988	79	1,796	350	21	2,537	303	8	4,418	1,046	3	15	28
Portland, Me.....	71	137	.....	.....	13	9	1	.....	.....	19	1	2	.....	.....
Portland, Oregon.....	.....	11	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilmington.....	1	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....
New Bedford.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Gloucester.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Key West.....	.....	737	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	2
Galveston.....	2	49	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
Charleston.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brunswick.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport News.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	52,549	37,284	384	7,647	107,727	5,102	43,598	26,907	6,315	36,367	12,940	2,743	4,193	73,806

Ports.	Spain.	Portugal.	Denmark.	Hungary.	Austria.	Bohemia.	Finland.	China.	Armenia.	Australia.	Turkey.	Greece.	All other countries.	Total.
New York.....	117	1,182	9,043	26,433	26,539	8,498	4,119	4	380	7	142	981	3,052	405,064
San Francisco.....	28	143	14	4	30	.....	.....	2,058	.....	323	.....	.....	1,021	5,134
Philadelphia.....	5	.....	451	684	547	.....	10	.....	.....	1	65	103	1,083	25,798
New Orleans.....	124	.....	11	.....	15	.....	.....	.....	.....	1	2	4	149	4,197
Baltimore.....	.....	.....	474	.....	6,468	.....	.....	.....	.....	.....	.....	.....	23	40,712
Boston.....	10	8	201	34	75	.....	.....	1	.....	5	1	4	1,184	30,739
Portland, Me.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	256
Portland, Oregon.....	.....	.....	.....	.....	.....	.....	.....	57	.....	.....	.....	.....	85	154
Wilmington.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	11
New Bedford.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	799	800
Gloucester.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	8
Key West.....	1,906	1	.....	.....	.....	.....	.....	8	.....	.....	.....	.....	6	2,686
Galveston.....	2	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	65
Charleston.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2
Brunswick.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17	18
Newport News.....	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	9
Total.....	2,191	1,341	10,201	37,155	33,674	8,498	4,129	2,128	380	339	212	1,092	7,441	516,253

TABLE 3.—SHOWING THE NUMBER OF IMMIGRANTS DESTINED TO EACH STATE, TERRITORY, AND THE DISTRICT OF COLUMBIA DURING THE FISCAL YEAR ENDING JUNE 30, 1891.

States and Territories.	Number.	States and Territories.	Number.
Alabama.....	622	New Hampshire.....	1,118
Arizona.....	308	North Carolina.....	412
Arkansas.....	517	North Dakota.....	1,048
Connecticut.....	10,639	Nebraska.....	4,864
Colorado.....	3,487	Nevada.....	559
California.....	13,880	New Jersey.....	18,128
Delaware.....	1,150	New Mexico.....	469
District of Columbia.....	1,273	New York.....	176,891
Florida.....	3,255	Ohio.....	20,062
Georgia.....	584	Oregon.....	1,919
Indiana.....	3,661	Pennsylvania.....	75,764
Indian Territory.....	374	Rhode Island.....	4,407
Illinois.....	47,329	South Carolina.....	437
Iowa.....	7,739	South Dakota.....	1,615
Idaho.....	497	Tennessee.....	750
Kentucky.....	1,155	Texas.....	4,815
Kansas.....	2,738	Utah.....	1,575
Louisiana.....	3,600	Vermont.....	830
Maine.....	1,367	Virginia.....	774
Maryland.....	3,089	West Virginia.....	890
Michigan.....	17,912	Wisconsin.....	14,162
Missouri.....	7,023	Washington.....	1,596
Minnesota.....	11,677	Wyoming.....	718
Mississippi.....	493	Not stated.....	43
Montana.....	1,411		
Massachusetts.....	36,727	Total.....	516,253

TABLE 4.—SHOWING THE TRADES AND OCCUPATIONS OF IMMIGRANTS AS REPORTED ON ARRIVAL AT PORTS IN THE UNITED STATES DURING THE FISCAL YEAR ENDING JUNE 30, 1891.

Occupation.	Number.	Occupation.	Number.
Architects.....	88	Machinists.....	2,104
Brewers.....	880	Millers.....	1,003
Butchers.....	2,723	Musicians.....	1,270
Barbers.....	1,435	Painters.....	1,938
Bakers.....	2,754	Peddlers.....	3,192
Blacksmiths.....	2,534	Plasterers.....	948
Bartenders.....	392	Porters.....	743
Bricklayers.....	1,047	Potters.....	216
Carpenters.....	3,932	Printers.....	860
Cabinetmakers.....	2,160	Saddlers.....	428
Confectioners.....	604	Shoemakers.....	5,930
Cigar-makers.....	2,514	Spinners.....	530
Cooks.....	815	Tailors.....	9,566
Coopers.....	463	Tinsmiths.....	1,188
Farmers.....	49,108	Tanners.....	588
Florists.....	320	Wagon-smiths.....	786
Gardeners.....	1,328	Weavers.....	2,095
Hatters.....	545	Waiters.....	1,085
Iron-moulders.....	591	All other occupations.....	25,100
Laborers.....	180,895	No occupation, including women and children.....	189,447
Locksmiths.....	1,536		
Laundrymen.....	45	Total.....	516,253
Masons.....	3,378		
Miners.....	7,149		

REPORT
OF THE
SECRETARY OF WAR.

WAR DEPARTMENT,
Washington, November 3, 1891.

To the PRESIDENT:

In submitting to you this report, it seems proper, as a preliminary to such comment as they may require, to refer briefly to the new legislative and administrative measures affecting the Department that have been inaugurated during your administration.

In the line of coast defense, sites for fortifications have been procured, and engineering work has been begun on batteries for mortars, and emplacements for guns, at New York, Boston, San Francisco, Hampton Roads, and Washington. The north wing and center section of the gun factory at Watervliet have been completed and nearly equipped. A south wing, doubling the capacity, is now being built. Provision has already been made for the manufacture by the Government of ninety-eight breech-loading steel rifled guns of high power, and a contract has been made with private manufacturers for one hundred more. A supply of submarine mines and seventy-three 12-inch mortars are also under construction.

For the improvement of the enlisted force new methods of recruiting have been adopted. It is carried on more in small towns and rural communities, and the recruits are held on probation and their antecedents carefully inquired into. The ration has been increased by the addition of one pound of vegetables daily. Soldiers are now entitled to a discharge at the end of three years of faithful service, and are permitted to purchase their discharge at any time after one year. Summary courts have been established for the speedy trial of petty offenses.

If the men desire, competent officers are assigned to defend them before courts-martial. Punishments in time of peace, under the articles of war, have been defined and limited. Sunday inspections and tattoo roll-call have been abolished; schools and gymnasia established. These, together with the specific measures undertaken for that purpose, have reduced the percentage of desertions to a lower point than ever before in the history of the Army, and in the last year have reduced the number of inmates of our military prisons over 20 per cent.

A system of examination of officers for promotion has been established, and their promotion, with the exception of one grade, has been put upon a lineal basis throughout the Army. The retired list has been relieved by appropriate legislation. An efficiency record of officers has been kept, enabling their selection for special duty to be made on that basis.

In pursuance of a policy of concentrating the troops in larger posts, about one-fourth of the number of posts occupied in 1889 have been abandoned, and the reservations turned over to the Interior Department. The employment of contract surgeons, in addition to the regular medical corps, has been nearly dispensed with. The licenses of most post traders have been revoked. The enlistment of Indians has been successfully undertaken. The detail of officers to colleges has been increased and new rules adopted. The Rebellion Records have been published much more rapidly under increased appropriations and a reorganization of the work. The military and hospital records of the late war have been brought together in the Record and Pension Division, the settlement of pension claims has been expedited, and the preservation of these valuable records for effective use is well toward completion. When finished six hundred clerks can be discharged or transferred to other Departments.

COAST DEFENSE.

The problem of adequate coast defense has practically been settled. Fortunately it has not been a question of party politics. There has been much discussion and some difference of individual opinion in respect to the rapidity with which the work should be executed and as regards details. It has been generally recognized, however, in Congress and by the public press as a national concern—a thoroughly American policy. Nor is it a new departure. The report of the Endicott Board, under the act of Congress of March 3, 1885, states that in 1860 our coast defenses “were not surpassed by those of any country

for efficiency either for offense or defense, and were entirely competent to resist the vessels of war of that period." But after the close of the war there was a most rapid development in the means of offensive warfare, while the fortifications which we had were not kept up, and much less was new work undertaken. Our coast cities, which in 1860 were well protected, in 1890 were defenseless.

In 1883 Congress provided for a joint board of army and navy officers to examine and report what method should be adopted for the manufacture of heavy ordnance for the use of the Army and Navy, and the cost of buildings, tools, and implements therefor. This board, after visiting the chief ordnance establishments of Europe and the principal steel manufactories of this country, submitted a report in 1884 which recommended the establishment of two gun factories, one for the Army at Watervliet Arsenal, West Troy, N. Y., and another for the Navy in this city, and that our steel manufacturers should be encouraged by suitable legislation to incur the large expense of erecting the plant necessary for producing such gun metal as is required.

In 1885 Congress provided that a board composed of army and navy officers and civilians, of which the Secretary of War should be a member and president, should examine and report at what ports fortifications or other defenses were most urgently required, and the character and kind of defenses best adapted for each with reference to armament and the utilization of torpedoes, mines, or other defensive appliances. This board submitted a systematic and elaborate plan for the defense of the sea-coast at the twenty-six principal ports, and, with less detail, provisions for the defense of the lake frontier. Simultaneously with the investigations of this board the two Houses of Congress independently considered the subject, the Senate by a Select Committee on Ordnance and War Ships, of which General Hawley was chairman, and the House, by a Commission on Ordnance and Gunnery, of which Mr. Randall was chairman. The reports of these committees, made in 1886, are replete with valuable information. The conclusions reached by these various boards, so different in composition and so well qualified to consider the question from every point of view, were harmonious, and their several reports furnish all the details needful for an intelligent consideration of the subject. They have afforded the bases of legislation and appropriations of Congress which have inaugurated our present definite policy in respect to coast defenses.

This policy necessarily contemplates a system of land defenses as its

most important feature. We have some 4,000 miles of sea-coast, exclusive of Alaska. No great naval power has more than a few hundred miles of coast to defend, and yet even they protect their harbors with heavy fortifications and high-power guns. The cost of land defenses has not increased as rapidly as the cost of the means of attacking them. They are not only the cheapest to build, but once built the cost of maintaining them can be reduced to the minimum. Neither are they an experiment, nor can they become useless, but they may be built with a view to further strengthening if required, and capable of mounting larger guns if necessary.

Two appropriations of \$500,000 each for the purchase of sites for fortification and sea-coast defenses were made by the last Congress. Allotments have been made under these appropriations for sites for gun and mortar batteries at Grovers Cliff in Boston Harbor; Point Comfort, Fort Wadsworth, Plumb Island, and Sand Point in New York Harbor; Laguna Merced in San Francisco Harbor, and Sheridan Point on the Potomac. Proceedings of condemnation have been commenced to obtain other sites near Fort Wadsworth and Fort Hamilton in New York Harbor; Willoughby Spit in Hampton Roads, and Point Lobos in San Francisco Harbor. Over half of the entire appropriation has been allotted and about \$350,000 expended. Other payments are to be made as soon as the examination of titles by the Department of Justice is completed. The balance of the appropriation will probably be expended during the next five months, but it will not be sufficient to pay the awards of juries in cases now pending. I recommend that an appropriation of \$500,000 be continued annually until the important sites are secured. It will require this amount for several years to pay for sites as rapidly as they will be needed for use, and it is economy to acquire them as quickly as possible after their location has been determined.

At its last session Congress made an appropriation for building the south wing of the new gun factory at Watervliet and for the substantial completion of that plant, except that space has been left to add machinery for finishing 16-inch guns if their manufacture should be deemed advisable. The work of construction is now well advanced, and the machinery under contract.

Certain provisions in the last two fortification acts were designed to induce private manufacturers in this country to coöperate with the Government in fabricating guns as well as in supplying the steel forgings.

Advantageous bids were received and a contract made with the Bethlehem Company for supplying twenty-five 8-inch, fifty 10-inch, and twenty-five 12-inch guns.

This contract, and the output of the gun factory from forgings already under contract, provide for the manufacture of one hundred and ninety-eight breech-loading steel rifle guns of high power, sixty-two of 8-inch caliber, eighty-six of 10-inch, and fifty of 12-inch. Four have been finished, two 8-inch, one 10-inch, and one 12-inch; twenty-four more will be finished in 1892, thirty-four in 1893, forty in 1894, when the machinery at the gun factory will be nearly complete. Thereafter there can be manufactured about forty-five per year, and the deliveries from the Bethlehem one-hundred-gun contract will be eight to fourteen yearly, according to the proportion of small or large caliber. Besides the one hundred and ninety-eight, for which provision has already been made, if forgings are supplied to the gun factory, three hundred and fifty more guns can be turned out within the next ten years, and mostly of 10 and 12 inch caliber. I believe these figures to be conservative, and that the actual results will be greater, for with experience in manufacture the work should progress more rapidly.

Two batteries, each for sixteen 12-inch mortars, and emplacements for two 12-inch, two 10-inch, and four 8-inch guns are now in process of construction for the defense of New York; also one battery for sixteen 12-inch mortars, and emplacements for one 10-inch gun, with two more in preparation, at Boston; and emplacements for two 10-inch guns, with one 10-inch and three 12-inch in preparation, at San Francisco; for two 10-inch guns at Hampton Roads, and for two 10-inch guns at Washington. Progress has also been made in providing a suitable supply of submarine mines. A considerable number are on hand or under contract for the defense of New York, San Francisco, Boston, Hampton Roads, Philadelphia, Washington, and Charleston, and some of the mining casemates for operating them are completed or under contract at these ports and at Portland, Me. Contracts have also been made for the early delivery of seventy-three 12-inch cast-iron rifled mortars, hooped with steel, of a pattern known to be serviceable, though probably not equal to an all-steel construction now under test.

The Department has been obliged, on account of the financial embarrassment of the contractors, to extend the time until January, April, and July, 1892, for the delivery of the ten guns contracted for with the Pneumatic Dynamite Gun Company for Sandy Hook, Fort Schuy-

ler, Fort Warren, and San Francisco. One of these guns was to be of 8-inch, and nine of them 15-inch caliber. Three of the latter are, by law, to be mounted on the Pacific coast. The Chief of the Bureau of Ordnance states that—

Reports furnished the Department of trials made of a 15-inch pneumatic dynamite gun manufactured in this country for the English Government are quite favorable to the performance of the gun and its projectile.

The point has now been reached when, by the continuance of the present rate of appropriations for coast defenses, which have been moderate, the work can be carried on systematically and judiciously. To stop or check it now would be to lose much that has been done; to continue will be both safety and economy. Each year some part of it can be completed so as to become available, and thereafter every gun mounted will add to its efficiency.

The Board of Ordnance and Fortification in their report say:

Four years' continuance of similar legislation and activity and it can no longer be said that the United States is defenseless against foreign powers.

FIELD AND SIEGE ARTILLERY.

Good progress has been made in the production of improved rifle steel ordnance.

3.2-INCH STEEL FIELD GUNS.—One hundred have been completed and twenty-five more are under manufacture. The ten regular light batteries are nearly supplied with these guns, and they are now being furnished to the National Guard.

3.6-INCH HEAVY STEEL FIELD GUNS.—A type gun has been completed and proved by a test to be satisfactory. The manufacture of twenty-four others and carriages for them will soon be commenced.

3.6-INCH STEEL FIELD MORTARS.—The type mortar in this class was tested last year. Sixteen of these pieces are now in process of manufacture and will be completed with cast-steel carriages within the coming year.

5-INCH BREECH-LOADING STEEL RIFLE FOR SIEGE SERVICE.—The type gun is completed and has stood a satisfactory test. The manufacture of ten more has been commenced and should be completed during the ensuing year. A carriage for this gun has also been manufactured and tried, and ten to mount the ten guns under manufacture will be made at the Watertown Arsenal for issue with the guns.

7-INCH BREECH-LOADING STEEL HOWITZER FOR SIEGE SERVICE.—The type gun has been completed and tested, and ten more will be

finished during 1892. An experimental carriage for this howitzer has been manufactured, and is now at the proving ground for test. If satisfactory others will be completed as fast as the howitzers are ready for mounting.

MAGAZINE SMALL-ARMS.

During the year a board has been appointed, consisting of officers from the ordnance, cavalry, and infantry, to consider, test, and report upon magazine small-arms. They have examined those in use in the principal European armies, but a satisfactory smokeless powder is an essential element for consideration in fixing upon the reduced caliber. Their experiments and reports of similar trials made abroad indicate that magazine arms are still so far from perfection that it is not wise to change from our present excellent single loader to a magazine system in too great haste.

If we have been slow in this matter, we have at least been saved the great expense incurred by most foreign nations in adopting an unsatisfactory magazine arm prematurely. The Board, which has not as yet made a report, is still conducting experiments, and is giving American inventors every aid and facility for perfecting and testing their arms.

DESERTION.

Desertions from the Army for the year ending September 30 have been less than in any other year in the history of the Army. Previous to 1820 there are no reliable records, but from that time till the beginning of the War of the Rebellion the average annual rate of desertion was 14.8 per cent of the enlisted strength, and since the war it has been nearly the same. From January 1, 1867, to June 30, 1891, twenty-four and one-half years, the number of desertions from the Army was 88,475. It has cost the Government a very large sum for pay, clothing, subsistence, and transportation of recruits to replace these men.

For the year ending June 30, 1889, the rate was 11.6 per cent; for the year ending June 30, 1890, 9 per cent; for the year ending June 30, 1891, 6.1 per cent. During the twelve months ending September 30, 1891, the rate was only 5.8 per cent, and for a like period ending October 31, 5.7 per cent. The diminution is still going on, and the percentage is being reduced month by month. Great as the reduction has been, however, there is no good reason why desertions should not be reduced to 3 or even 2 per cent. Probably they can not be reduced below 2 per cent. This much will have to be charged to the perversity of human nature and the ineradicable restlessness of the American people.

RECRUITS.

An effort has been made to improve the character of the recruits of the Army by excluding, as far as practicable, men of questionable habits or reputation. Applicants for enlistment are not accepted unless they produce satisfactory evidence of good character. In case of doubt they are held on probation a reasonable time, and, if the result of the probation is not satisfactory, are discharged before any expense for uniform, pay, or transportation is incurred. Heretofore recruiting has been carried on in from thirty to forty of the largest cities of the country, and the rendezvous have sometimes been established in sections of these cities frequented by the least desirable classes from which to obtain recruits. Besides giving special care to the proper location of such rendezvous as are still maintained in the larger cities, the experiment has been tried, with excellent results, of extending recruiting to the smaller towns. The number of recruiting stations has thus been increased more than five-fold, and besides many villages and rural districts are visited by non-commissioned officers from neighboring rendezvous. Wherever regiments are favorably located for sending recruiting parties into the towns and villages within a reasonable distance from their posts, they are required to depend largely for recruits upon their own exertions. As a result the number of desirable recruits obtained from the rural districts during the past year has been much larger than heretofore, and that has doubtless contributed considerably toward the great reduction of desertion.

By a recent order the maximum age at which original enlistments are made has been reduced five years, and is now limited to those under the age of thirty years. It would be very desirable if this age limit could be still further reduced and no reenlistments allowed except in case of such non-commissioned officers as have attained special proficiency. This would return the soldier after three or five years' service to civil life, in the majority of cases better fitted for it than when he enlisted. It is better that the soldier's service should be an incident, and not the business, of his life. If retained too long in the Army he can not succeed out of it, and so may end his days in the Soldiers' Home, instead of in a home of his own. The Army, in time of peace, while training men for the possible contingency of war, should not unfit them for the certain duties of peace. But the age limit can not be further reduced unless greater inducement is offered to a good class of young men to enlist. This should be done by a reasonable increase in the pay of non-commissioned officers, espe-

cially that of first sergeants, and by giving them a better opportunity to compete upon examination for commissions. The increased expense in the pay of non-commissioned officers could, if necessary, be balanced by curtailing somewhere else. The cost could be saved in many places better than it can be spared in this. The character and efficiency of the company depends largely upon the first sergeant.

PROMOTION FROM THE RANKS.

I would renew the suggestion of my last report, that the provision of the statute, making the recommendation of the company commander a condition precedent to promotion from the ranks to a lieutenancy, be repealed. Every soldier should be permitted to appear before preliminary boards and be given an opportunity to establish his claim to consideration. This preliminary examination should be very critical regarding antecedents, and take a wide scope with reference to the personal and moral character of the candidates.

Under this more liberal provision, I believe that more men would qualify than could be commissioned. The most meritorious could be selected upon the final examinations. It would be well if there were some provision by which others, that establish a high degree of proficiency, but fail to secure commissions, might be permitted to retire from the service with some honorary recognition.

COURTS-MARTIAL.

Thirty-two of the thirty-four Articles of War under which enlisted men can be tried, authorize the punishment of the offender at the discretion of the court. In consequence there was great variance of punishment prevailing in different military departments. The only check upon this disparity was the remission of sentences deemed excessive, by the exercise of Executive clemency. Although that lessened the evil, it impaired the certainty of punishment and perverted the proper use of the pardoning power. By an act of Congress, approved September 27, 1890, you were authorized to prescribe and define the limits which punishments, left to the discretion of courts-martial, should not exceed in time of peace.

By virtue of that authority you issued an order, which took effect on the 28th of March last, prescribing uniform punishments for different offenses, properly graded in accordance with their gravity. An act of October 1, 1890, instituting summary courts in certain cases, has provided a more speedy and satisfactory method than the formal court-

martial for the trial and punishment of petty offenses. The right to demand and receive a trial before a regular court-martial is reserved to the accused if he desires. Both these measures have been in the interest of prompt and uniform administration of justice, and are proving very satisfactory both to officers and men,

THE THREE-BATTALION ORGANIZATION.

The question of the three-battalion organization for the infantry has been before Congress, and on account of the great defects of the present system must necessarily be the subject of discussion until remedied by legislation. A measure in other respects desirable which would materially increase the expense of the Army might not receive favorable consideration, but the essential features of this change can be had without increase of expense.

The single battalion organization of infantry is radically defective and unfit for actual service under present conditions. During the period since the civil war our infantry organization has remained unchanged, and is now, in respect to the single battalion feature, obsolete. It is so vicious that the first step in case of war must be to abolish it and to start anew. It can not be amended or modified; it is unwieldy, incapable of subdivision to either make or meet attack under methods now prevailing, and the situation grows worse with every improvement of arms. The development of range, rapidity, and accuracy of fire of modern arms has been so great that a smaller and more flexible battalion is essential, for this development makes celerity in handling troops on the field a prime necessity.

The adoption of the three-battalion system has been repeatedly urged by all our distinguished generals, and General Sherman considered it of such commanding importance that he made it the only subject of recommendation in his last report as General of the Army.

But important as it was at that time, it is a necessity now, for under the new tactics required by the increase in range and rapidity of fire, a ten-company battalion can not be maneuvered. The principle can be adopted and the substantial advantages of the three-battalion organization obtained without increase of cost; two of the battalions to be composed of the present eight full companies, and the third to be in part a skeleton battalion, which could readily be completely organized in case of war.

THE ARTILLERY.

A bill for the reorganization of the artillery passed both Houses at the last session of Congress, but amendments were added in the Senate, and the amended bill reached the House so late in the session that it failed to receive action. From a purely military standpoint the organization of this arm is not defective, but two first lieutenants in each battery are an unnecessary expense.

There are now twenty-six first lieutenants and thirteen second lieutenants in each regiment of artillery. The number of lieutenants can be reduced without embarrassing the efficiency of the organization, so that seven regiments of two battalions of four foot batteries each, and one battalion of two light batteries will cost no more than the present five regiments; and this form of organization will be a better nucleus and more readily admit of expansion and the necessary increase in case of war.

Promotion is slow during a long peace under the most favorable conditions, and, in respect to the first lieutenants of artillery, it is so great that the officers are beyond the age of most efficient service before they become captains. Captains of infantry serve on the average four years longer in that grade before promotion than do captains of cavalry or artillery, while first lieutenants of artillery serve four years longer in that grade than do first lieutenants of infantry or cavalry. The proposed measures will tend to remedy these inequalities in promotion.

THE PAY CORPS.

The law now provides that no appointments of paymasters shall be made until the number of majors shall have been reduced below twenty-nine. Without casualties or retirements for disability, the corps will be reduced below the number authorized, and there will be a vacancy in the place of an officer retired for age in September next. Already applications are being received for appointment in this corps in anticipation of early vacancies.

In view of the great number of posts that have been abandoned in the last three years, and the probability that others will be in the immediate future, and that these posts are, as a rule, the remote ones, requiring the most travel and time to reach, the corps might be still further reduced without injury to the service. Besides this, most of the posts and arsenals are located in or near towns and the force at some of them is

so small that payments can be made by checks sent by mail or by money sent by express, at a decided saving of time and expense.

To send a paymaster and clerk 100 or 200 miles to pay 50, and in several cases less than 25 men, requiring from 1,500 to over 2,000 miles' travel annually, for each post, seems an antiquated and unbusiness-like method, and I have recently directed that payments at several points be made in the manner above indicated. The corps can be safely reduced to twenty-five majors or even less if the Secretary of War be authorized to assign officers of other arms of the service, at remote posts occupied by small garrisons, as acting assistant paymasters in addition to their other duties.

ENLISTMENT OF INDIANS AS REGULAR SOLDIERS.

In March last a general order was issued authorizing the enlistment of one company of Indians for each of the twenty-six regiments of white cavalry and infantry serving west of the Mississippi River. This action was taken after careful inquiry into the conduct in the past of Indian scouts and police employed in a military or quasi-military capacity.

The primary object, fully justifying the experiment, in my judgment, was to give employment, in useful and legitimate channels, to a considerable number of Indians of the warlike tribes. Having been deprived, by the extinction of game, of both employment and means of subsistence, they can not be changed at once from nomads to quiet and successful farmers. Incidentally it was hoped that the habits of obedience, cleanliness, and punctuality, as well as of steady labor in the performance of both military and industrial work inculcated by service in the Army, would have a good effect on those who might enlist, and also furnish an object lesson of some value and exert a healthy influence upon others of their tribes.

It was not deemed advisable to urge Indians into the service hastily, and special efforts have been made to inform them of the responsibilities they would incur and the duties that would be required of them as soldiers. The results have been very satisfactory. Seven companies, three of cavalry and four of infantry, have been recruited to their full complement, and seven others partially, and the reports indicate that the organization of these will be completed at an early day. I have had an opportunity to personally inspect some of these Indian cavalry troops, and have received full reports showing the condition of others. In good conduct, drill and military bearing, attention to duty, observ-

ance of courtesies, and care of horses, arms and equipment, clothing, barracks, mess rooms and kitchens, they are at least equal to soldiers of other races of no greater experience.

For example, Troop L, of the First Cavalry, recruited from the Crow tribe, though none of its members had had more than five months' service, furnished as early as September 14 last its full quota of non-commissioned officers, trumpeters, and privates for guard, fatigue, and other post duties; and on a recent two weeks' practice march of the command to which it belongs demonstrated its capacity for the performance of the various duties of the expedition. The colonel of the First Cavalry recognizes that the men of this troop possess in a high degree the characteristics and traits essential in light cavalry, and considers them a valuable acquisition to his regiment. Satisfactory reports have also been received of the progress of the Indian infantry companies.

Nothing unfavorable has been brought to the attention of the Department regarding the utility as military organizations of the Indian companies of either arm, but so far there is every reason to believe that much more than was expected of the experiment will be realized. They are treated in all respects like other soldiers, and the same duties are required of them. They are dressed the same, fed the same, taught to cook and eat their food in the same manner, and in every respect they strive earnestly to equal, and, if possible, outdo their white comrades. All commands are given in English, and though few of them understand the language they learn the sound of their orders quickly and make rapid progress in drill.

Some of the companies, which have only been enlisted for three or four months, would make a creditable appearance at any encampment or review. When it is considered that a short time ago many of these Indian soldiers were "blanket Indians," that few of them ever had on a suit of clothes, slept under a roof, ate at a table, used a knife and fork, wore shoes, or had their hair cut, the transformation is indeed remarkable.

The habit for a few years of wearing good clothes, eating good food well cooked by themselves, and living in clean and comfortable quarters, and the lesson that these comforts are earned by their own good conduct, will not be entirely lost upon men of any race or color. They are receiving instruction in English and in the methods of civilized life that will help them to help themselves when discharged. They will be impressed with the power of the Government and the folly and futility of disobedience of its authority.

I am confident that after a few months' training they will be fit for any service, and, properly managed, will furnish a valuable addition to the military strength of the nation. Great care must be taken in the selection of officers to whom is intrusted the instruction and development of these companies. Only officers of high character, that believe in the work and in the possibility of progress and civilization for the Indian, who are patient and faithful, and not only soldiers of the highest order, but imbued with something of the missionary spirit as well, should be selected.

It is not only an important step toward their civilization, self-support and control, but is the cheapest and best insurance against further Indian troubles. While I believe they will prove trustworthy in any service, even against their own people, they will, at least, be sureties in some measure for their respective tribes.

ABANDONMENT OF SMALL POSTS.

Twenty-eight army posts, about one-fourth of the entire number June 1, 1889, have been abandoned since that date. Ten or twelve more can be abandoned as soon as suitable shelter for the troops is provided at more central points. The troops should be assembled by regiments, or at least battalions, in well-built posts at strategic and convenient points as rapidly as it can be done consistently with adequate protection against possible Indian depredations. Even for this purpose it has been found by experience that troops stationed at convenient railroad centers are more available than those at posts nearer the scene of trouble but not on the railway. Besides the economy of transportation, supplies, etc., a much greater percentage of men is available for service from a large post than from a small one. Fewer are employed outside of their legitimate military duty, and the discipline and drill of the command is improved.

CONTRACT SURGEONS.

In 1889 there were forty-eight acting assistant surgeons, commonly called "contract surgeons," of the fifty allowed by Congress. The number has been reduced to twenty-one, and the services of these can be spared during the present fiscal year. I have therefore made no estimate for the employment of contract surgeons for the coming fiscal year. There has also been a reduction in the numbers of the hospital corps and of the matrons. The abandonment of posts has made these reductions practicable.

The regular estimates for the medical department will be about \$150,000 less than last year, due to economy in its administration and to the discontinuance of the employment of contract surgeons.

POST TRADERS.

At the beginning of this administration there were licensed post traders at most army posts. They were a privileged class, exempt from taxation because located on Government reservations, and had practically a monopoly of the trade in such articles as were not furnished or sold by the quartermaster or commissary. Wherever cities and villages have grown up near the formerly remote western posts, and the post trader has thus ceased to be a necessity, it has been my purpose to discontinue the system as rapidly as possible, and permit the trade of military posts outside of the ordinary governmental supplies to take its regular channels.

On the 4th of March, 1889, there were eighty-five of these traders. There are now but twenty-two, and seven of these have been notified that their licenses will be revoked within a short time at a date so fixed as to give them an opportunity to sell or reduce their stocks. Four of the remaining fifteen are at posts whose abandonment has been ordered or soon will be, so that at the end of the fiscal year there will be only eleven remaining.

The parties who held these privileges had large personal and political influence, and it has not been an easy or a pleasant task to make this change. Many of them, also, had invested considerable capital in these enterprises, and were, therefore, entitled to consideration and a reasonable time to close their business. But their profits had been large, and I believe that no injustice has been done them. It was a pernicious system and necessity was the only excuse for its existence at any time. It has outlived whatever usefulness it may have had, and its longer continuance is not for the interest of the service or for the public good.

RECORD AND PENSION DIVISION.

In my last annual report I referred to the creation of the Record and Pension Division of this Department in July, 1889. It was placed under the direction of Major Ainsworth and given charge of all the hospital and service records of the volunteer armies in the war, and of all business in the Department relating thereto. At that time there were 40,654

unadjusted and unanswered cases on hand, all of which, together with current business, was disposed of before June 30, 1890. During the past fiscal year the division received 459,497 cases, of which the records of the office show that 98 per cent were disposed of and answered within twenty-four hours of their receipt. There were no cases left over undisposed of June 30, 1891.

The number of cases received during the past year was 158,259 in excess of the previous year, being an increase in business of 52 per cent. As about two-thirds of the business of this division is in connection with the Pension Bureau of the Interior Department, I take the liberty of quoting from the report of Commissioner Raum to the Secretary of the Interior September 22, 1891, in which he says: "The great improvement which Major Ainsworth has brought to that branch of the public service enables this Bureau to receive within twenty-four hours from the day of the calls full reports as to the military and medical history of claimants as shown by the records of the War Department, whereas in former years these requests remained unanswered for months."

In addition to the current work of the office, the clerks of the division have also been engaged in transcribing the original records by the card-index system. The copying of the hospital records was completed in 1890, and work was then begun on the muster rolls and military records of all soldiers, not only in the War of the Rebellion, but also in the Mexican war and the Florida and other Indian wars. Work was first begun on the rolls of the New York troops, which were the most difficult on account of the large number of different organizations. It required eleven months to complete them. As this work progresses, however, the labor of searching is diminished, and the current business of the division can be managed by fewer clerks, leaving a larger force for the permanent work of the preservation of the records. It is expected that by the first of December next there will remain to be transcribed only the rolls of the eight following States: Illinois, Indiana, Massachusetts, Michigan, New Jersey, Ohio, Pennsylvania, and Wisconsin.

These records were rapidly going to destruction, although for generations they will be indispensable for the transaction of the public business. I have already spoken in my previous reports of the necessity of their preservation and of the excellence of the card-index system, not only for the accomplishment of that purpose, but also for the most economical and expeditious use of the information they contain. At the present rate of progress this work can be completed within the

next year and a half, or early in 1893, at which time this Department can dispense with the services of about 600 of its present clerks, at a saving to the Government, in salaries, rent, and otherwise, of at least \$1,000,000 yearly.

These clerks, who have been faithful to their work and whose efficiency has been proved, are entitled to consideration, and I trust some provision may be made for their transfer to other Departments of the governmental service instead of making new appointments in those Departments.

MILITARY RECORDS OF THE REVOLUTION.

These records are scattered and not readily accessible for reference, the most valuable being in the State Department, while others are in the Treasury and Interior Departments. Provision should be made by Congress for collecting these records in one department, where they could be properly indexed and arranged for use when required.

REBELLION RECORDS.

It will require in all 105 books of the present average size to complete the first series which covers all war operations proper. In the nine years previous to July 1, 1889, thirty-six books had been printed. Since that time thirty-one have been completed and distributed, twenty-one of these since September 1, 1890, when the increased appropriation became available. Eight more have been put in type and are being indexed.

The volumes issued during the past year cover the Mine Run campaign of the Army of the Potomac, the operations on the South Atlantic coast in 1863, the Chickamauga campaign, including the battles of Missionary Ridge, Lookout Mountain, and the siege of Knoxville, together with the campaigns in the Wilderness and the Shenandoah Valley, the movements of all the armies to May 1, 1864, and those in West Virginia, Maryland, and Pennsylvania down to August 3, 1864.

The narrative relating to the Trans-Mississippi region has been carried to June 30, 1864, and that relating to the operations of the South Atlantic Coast to November 30, of the same year. The volumes, five in all, relating to the important operations of the Atlanta campaign are now in press and will be printed and distributed before January 1. The present rate of progress will carry the work to the end of 1864 during the current fiscal year, and complete this series embracing the entire official record of the campaigns of the war during the fiscal year ending June 30, 1893.

The second series, which will number twenty books, for which a large amount of valuable matter has already been collected and prepared for compilation, and upon which the work of publication will be commenced as soon as the first series is completed, will contain the correspondence, orders, reports, and returns, Union and Confederate, relating to prisoners of war, and (so far as military authorities are concerned) to State and political prisoners. The second series will be followed by the third and fourth (numbering in all eight volumes), which will contain the reports, orders, and correspondence in regard to the raising of troops, etc., but not relating directly to the military operations.

Since September 1, 1890, 231,000 books have been received from the printer, and 170,212 have been addressed and distributed; 1,100,000 address labels have been printed; 5,984 books have been sold; 16 books have been indexed; 240,000 cards have been used in the preparation of the indexes; 105,206 folios of reports and correspondence have been copied, compared with the originals, and converted into printer's copy; 5,650 galleys and 14,119 pages of proof have been received and revised.

EXAMINATIONS FOR PROMOTION.

Under the provisions of the act of Congress approved October 1, 1890, examinations for promotion have been extended to all officers of the Army below the rank of major. In consequence of its immediate application to a large number of officers previously not subject to any test for promotion, inquiry in the first instance was restricted to subjects requiring but little preparatory study. An amended plan of much larger scope has been prepared and published, which will come into operation on the 1st of January, 1893, thereby giving all interested ample time for preparation. In regard to the line, strictly technical and scientific subjects have been carefully excluded, and the examination confined to matters regarded as applying exclusively to fitness for practical service.

The necessary preparation for examination has stimulated professional study throughout the Army. From the progressive improvement apparent in the records of examining boards, it is believed that the investigations necessary to qualify under the new requirements will result in the most gratifying proficiency, especially in the combatant arms of the service.

LINEAL PROMOTION.

Section 1, of the act of October 1, 1890, provides that promotions in each arm of the service shall be according to seniority in the next lower grade, except that first lieutenants in commission when the law became operative were, by an amendment to the bill, excepted from this provision. The apparent object of the exception was that certain inequalities that had arisen in promotions from second to first lieutenantcies under the old system of regimental promotion might, perhaps, be rectified by the accidental fluctuations possible in future promotions to captaincies. It was an effort to cure an evil by its continuance.

The expectation with regard to the proviso depends entirely upon chance, and is to a great extent fallacious. The disadvantages of the regimental system are made more apparent when applied to only one class of officers, and especially so when contrasted with the uniform and more just results which are obtained in all other grades of the Army. For example, since the passage of the above act first lieutenants of cavalry have been promoted to be captains that stood thirty-seventh, forty-second, and sixty-first, respectively, on the Army Register at the date of their promotions. In the artillery first lieutenants have been promoted that stood eighteenth, twentieth, and twenty-third, respectively, and in the infantry those that stood only one hundred and sixtieth, one hundred and sixty-third, and two hundred and ninth in the lineal list of lieutenants of that arm of the service. The exception should be repealed and the law made to apply uniformly to all.

EFFICIENCY RECORDS.

The Department should have at its immediate disposal correct information relative to the capacity, habits, and professional attainments of each officer of the Army. This information is required by the Secretary and by the superior military authorities in selecting officers for the varied, important, and often-times delicate duties to which they are frequently assigned. I found in the Department no system for procuring or preserving such knowledge for use. The personal acquaintance possessed by a few in the Department and at headquarters regarding a limited number of army officers constituted practically the sole information upon which officers had to be detailed for special duty.

The just claims of every officer are entitled to and should receive consideration. In order to meet this necessity each officer has been required, by general orders, to report upon any studies which he has

pursued in the immediate line of his profession or otherwise, and any special work which he has done; and commanding officers have likewise been required to furnish full reports upon each officer under their command. The information thus obtained constitutes what is known as the efficiency record of officers.

A personal acquaintance with the officers of the Army justifies me in saying that the reports have been made with fairness and great accuracy. These records have been of much assistance in the selection of officers for detached service. The effect upon the officers, also, has been salutary, and must be increased by the knowledge that selection for special service will depend upon their records and not upon influence. If the system thus inaugurated be continued it can not fail to do much good for the service.

CIVILIAN APPOINTMENTS.

As a result of the military legislation of the last session, it has become necessary during the fiscal year to give effect to the act of June 11, 1878, by selecting a number of candidates from civil life for appointment as second lieutenants in the Army. It has been the purpose of the Department in making these selections to secure the best possible material, and to this end the recommendations on file were carefully scrutinized and the instructors at the principal colleges at which military instruction is given were invited to submit the names of those students who, in addition to high scholarship, had evinced the greatest aptitude for the military service. The candidates thus selected were subjected to a rigid examination as to their physical and mental qualifications, and only those who successfully passed were recommended for appointment. Of forty-one candidates who were authorized to appear, twenty-three succeeded in passing most creditable examinations. Of these thirteen had received military instruction under Army officers at colleges. Ten were members of the National Guard. Those first selected have been ordered to Fort Leavenworth for special military instruction, and satisfactory reports have been received of their aptitude and capacity, and of the zeal and energy with which they have entered upon the performance of their duties.

APPRENTICE BATTALION.

The formation of an apprentice battalion, to be composed of boys from sixteen to eighteen years of age, has often been recommended by prominent officers of the Army, and the question of its organization

under the present law has been considered. The purpose of the plan, however, would be better accomplished by the aid of some legislation.

It has been suggested that this battalion be composed of a superior class of lads, one to be selected from each Congressional district, and that they be given a good English education and military and manual training, so as to fit them for either civil life or military service.

I am not prepared to give the measure unqualified recommendation, but it is favored by so many officers of ability and experience that it is entitled to consideration.

MILITIA.

The present method of allotment of the annual appropriation of \$400,000 for arming and equipping the militia, which is prescribed by the act of February 12, 1887 (24 Stats., 401), and which gives to each State an amount proportionate to its Congressional representation, is not such as to produce the best results. The aid given different States is very disproportionate. The amount of Government aid received by some States is not more than half that received by others that maintain double the number of men in their National Guard.

There is no inducement for the maintenance of a greater number of militia than is actually required by the law, but rather the reverse, if economy be consulted. The allotment as now made is not based upon what the States do in return for the appropriation, but what they ought to do. It would be better to help those who help themselves. If the appropriation, or even one-half of it, was distributed upon the basis of the effective force of the National Guard maintained by the several States, it would better accomplish its purpose of encouraging that organization.

By the detail of officers and troops to the various annual encampments throughout the country, the War Department has rendered the National Guard of the several States such assistance as was in its power. The association of this force, necessarily the main dependence of the country in any great war, with the regular Army is of great advantage to both organizations. In this and every other way possible the Federal Government should coöperate with the States in the maintenance and education of the National Guard.

NATIONAL CEMETERIES.

There are eighty-two national cemeteries, in which are buried 328,115 soldiers. Each cemetery is under the care of a superintendent who

served in the Army of the United States and was disabled from active service in the line of duty. The expense of caring for these cemeteries and for "repairs to roadways" leading to them is provided for by an appropriation in the sundry civil bill. But these roadways are *constructed* under special legislation for each case, the amount of the appropriation depending as much upon the skill and energy with which the bill is pressed as upon the necessary cost of a sufficiently good road. The result has been that some cemeteries have fared very much better in the way of road construction than others.

A general appropriation, smaller in amount than the sum of the special appropriations annually made, to be allotted where most needed, would be more just and economical and give more uniform and better general results. It will also be in accord with the general system of construction work by the Quartermaster's Department, where the care of these cemeteries is lodged.

CHICKAMAUGA AND CHATTANOOGA NATIONAL PARK.

The act of August 19, 1890, established a national park at the battlefield of Chickamauga, and placed its supervision and control under the War Department. The act authorized the appointment by the Secretary of War of a commission of three to have immediate charge of the park, and provided that each commissioner named should have actively participated in the battle of Chickamauga or one of the battles about Chattanooga.

Two of the commissioners were required to be appointed from civil life, and the third to be selected from among those officers of the Army best acquainted with the details of the battles of Chickamauga and Chattanooga, to act as secretary of the Commission. Under the provisions of the act I appointed J. S. Fullerton, of Missouri, who was assistant adjutant-general on the staff of Gen. Gordon Granger; Alexander P. Stewart, of Tennessee, a major-general commanding a division in the Confederate Army of Tennessee; Capt. S. C. Kellogg, of the Army, who was aide-de-camp on the staff of General Thomas, as members of the Commission, and Gen. H. V. Boynton, who was lieutenant-colonel commanding the Thirty-fifth Ohio Infantry, as an assistant and expert in historical work.

The Commission has made good progress, in view of the obstacles encountered in acquiring the land. Deeds for a small portion have already been received and are in the hands of the Attorney-General for investi-

gation of title. Not being able to obtain some of the land at a price deemed reasonable, proceedings for condemnation were had. In these cases the land has been appraised, and title can be procured as soon as the money is paid into court. The greater part, however, is now awaiting appraisement, but it is probable that title to most of it will soon be obtained. The States of Georgia and Tennessee have ceded jurisdiction over the park within their respective limits. The Commission has been diligent and earnest, and made the best progress possible under the circumstances.

EXPENDITURES, APPROPRIATIONS, AND ESTIMATES.

Expenditures for fiscal year ending June 30, 1891.

Salaries and contingent expenses.....	\$2,150,646.53
Military establishment: Support of the Army and Military Academy.	25,344,199.73
Public works, including river and harbor improvements	16,061,478.96
Miscellaneous objects	7,894,439.46
Total.....	51,450,764.68

Appropriations for fiscal year ending June 30, 1892.

Salaries and contingent expenses	2,022,830.00
Military establishment: Support of the Army and Military Academy.	24,849,426.88
Public works, including river and harbor improvements.....	8,611,614.22
Miscellaneous objects	3,699,553.95
Total	39,183,425.05

Estimates for the fiscal year ending June 30, 1893.

Salaries and contingent expenses	2,086,178.00
Military establishment: Support of the Army and Military Academy.	26,299,170.77
Public works	13,208,393.00
Miscellaneous objects	4,381,861.60
Total	45,975,603.37

CONCLUSION.

I would refer you to the report of the Major-General Commanding the Army for further information concerning the condition of the Army, and for its operations during the year; to the reports of the several bureaus and divisions of the Department for fuller details of its administration, and to the reports of the Board of Visitors and of the Superintendent concerning the Military Academy. They all contain valuable suggestions, fully and clearly presented.

I have not attempted to make any recapitulation of or merely formal

reference to them. It has seemed better that I should simply discuss those matters with respect to which some particular duty is charged upon me, or which seemed to be of the most general interest to the Army or the Department as a whole. I would call your special attention to the full account, in the report of General Schofield, of the operations of the Army last winter during the troubles with the Sioux Indians. This campaign, which was made in midwinter in a severe climate, was conducted in a manner deserving commendation.

The character and attainments of the older officers of the Army, who made their records during the great war, is too well understood to require any mention; but I wish to pay a well-deserved tribute to the younger officers, who have not had the great war opportunities of their seniors. Nothing in my connection with the Army has gratified me so much as the general high character and professional attainments of the younger officers of the Army, who have made the most of their opportunities under the conditions of comparative peace. It is upon them that we must depend in the future, and they can be implicitly relied upon to be equal to the requirements of any emergency.

As I am about to retire from this Department, I desire to acknowledge the earnest and loyal coöperation which I have at all times received in its administration from all of its officers and officials, and the encouragement and support which I have ever had from you.

REDFIELD PROCTOR,
Secretary of War.

PAPERS

ACCOMPANYING

THE REPORT OF THE SECRETARY OF WAR.

REPORT OF THE MAJOR-GENERAL COMMANDING THE ARMY.

HEADQUARTERS OF THE ARMY.

Washington, September 24, 1891.

SIR: I have the honor to submit the following report of operations of the Army during the last year, together with the reports of department commanders, the commanding officers of the Artillery School at Fort Monroe, and of the Infantry and Cavalry School at Fort Leavenworth, and those of the Adjutant-General and Inspector-General of the Army.

Upon the retirement of Brig. Gen. John Gibbon, April 20, 1891, Brig. Gen. Thomas H. Ruger, was assigned to the command of the Division of the Pacific, including at that time, the Departments of California and the Columbia. Subsequently Col. August V. Kautz, Eighth Infantry, was appointed brigadier-general to succeed General Gibbon, and, on July 2, 1891, was assigned to the command of the Department of the Columbia.

By the Executive order of July 2, 1891, the military divisions were discontinued, some changes made in the organization of departments, and the department commanders ordered to report directly to the Commanding General of the Army. The accompanying report of the Adjutant-General gives the precise organization of departments and their commanders at the present time, together with the stations of troops therein.

The past year was marked by a disturbance among the Sioux Indians, which was formidable in fact, and threatened to be far more formidable than any Indian war that had occurred in many years. The correspondence on file in the Adjutant-General's office and the report of Gen. Miles set forth, in detail, the nature and apparent causes of the threatened trouble with the Sioux, and the orders of the President designed to suppress that trouble as promptly and effectively as possible, having mainly in view the protection of the extended settlements surrounding the Sioux Reservation against destruction by hostile Indians. The execution of those orders involved the concentration of nearly one-half of the infantry and cavalry of the Army, and some artillery, upon the Sioux Reservation, for which purpose it was necessary to bring troops from nearly all parts of the country west of the Mississippi River. These movements were necessarily attended with great expense, but happily, the result fully justified the vigor of the measures adopted, which resulted in the suppression of the uprising without loss of life on the part of peaceful citizens, though the Army suffered considerable loss, and quite a large band of Indians was destroyed in conflict with the troops.

The following gallant officers were killed and wounded:

Killed.—Capt. George D. Wallace, Seventh Cavalry, and Lieut. Edward W. Casey, Twenty-second Infantry.

Wounded.—Lieut. Ernest A. Garlington, John C. Gresham, and James D. Mann, Seventh Cavalry; Lieut. John Kinzie, Second Infantry, and Lieut. Harry L. Hawthorne, Second Artillery.

Lieut. Mann subsequently died from the effects of his wounds. Also 30 enlisted men were killed and 44 wounded.

The experience gained in the campaign of last winter is valuable, as indicating the possible extent and the probable limits of future danger from any uprising of the Indian tribes. If it were true, as was then so generally believed, that the Sioux Indians meditated a general uprising, and their plans had been matured and executed with the secrecy and energy that usually characterize Indian movements, it would have been entirely impossible, with the troops then located near the Sioux Reservation, though constituting a very large fraction of the Army, to have prevented great loss of life and property in the surrounding settlements; while if, as was also believed by many, the uprising was intended to embrace other warlike tribes in other parts of the country, the entire military force of the United States would have been wholly inadequate to prevent great damage to the settlements surrounding the reservations. Whatever may be the fact as to those Indian plans, they were, happily, so far anticipated that the Sioux Indians were surrounded by an effective cordon of troops before they were ready for action; while the disaffection had at the time not spread so far among other tribes as to become dangerous.

A careful consideration of all the circumstances of this uprising among the Sioux seems to justify the opinion that no considerable number of them had seriously intended to engage in hostilities against the United States, unless driven to such a course by unbearable hardship, or in self-defense against the military operations ordered for their subjection. There is hence a well-grounded belief that, by the constant exercise of discretion in the management of the Indians, coupled with justice in all dealings of the Government with them, and the presence of a sufficient military force to overawe the turbulent minority among them, there need be no serious apprehension of an extended uprising of the Sioux, and, probably, not of any other Indian tribe.

It is also well worthy of the most serious consideration, that by the addition of a few thousand men to the enlisted strength of the Army, whereby a sufficient force might at all times be stationed in the vicinity of the great reservations, the danger of an uprising and resulting destruction of frontier settlements would be entirely removed, and the great expense of transportation of troops from distant parts of the country entirely avoided. I respectfully refer to the accompanying reports of division and department commanders, and their subordinate officers, for all the details of the operations of the troops during the Sioux campaign.

In all other parts of the Indian country almost entire peace has prevailed during the past year, notably in the Department of Arizona, which was for so many years the scene of barbarities committed by the Indians, and of the most arduous service ever rendered by any troops.

ARMY REORGANIZATION.

Whatever may be the judgment of Congress respecting the aggregate strength of the military force to be maintained in time of peace, it can not be doubted that the organization of that force should be such as to

make it most effective, and at the same time capable of most ready expansion whenever an increase is decided upon.

As heretofore frequently pointed out in the reports of the several commanders who have dealt with the subject, the conditions of modern tactics require the three-battalion organization for the infantry, as well as for the cavalry and artillery, each battalion to consist of not more than four companies, troops, or batteries. It has also been heretofore fully explained that in the artillery the company organization ought to be made to conform to that in the other arms of the service, namely, with one captain and two lieutenants, instead of three or four lieutenants, as under the present laws. It has also been fully explained that the necessities of the seacoast defense of the United States will speedily require some increase in the aggregate strength of the artillery. A careful estimate has shown that seven regiments, in lieu of the present five, will be required for this service, and that such a reorganization as will convert the present five regiments into seven can be made with very slight increase of expense, there being now in the five regiments almost the entire number of officers required to properly officer seven regiments.

I beg leave to invite attention to the annual reports of last year as setting forth more fully my own views, and those entertained by other officers of the Army on this subject, and to express the hope that Congress may be pleased, during the coming session, to provide for the desired reorganization of the infantry and artillery, leaving the question of aggregate strength to be determined in the wisdom of Congress for the present and at any future time.

THE NATIONAL DEFENSE.

The important question of national defense, which has been so thoroughly and publicly discussed in past years, is now confidently regarded as settled by the legislative action of the last two Congresses. The wise policy thus inaugurated will, doubtless, be steadily pursued until the great seacoast harbors are placed in condition to resist any attack from a foreign enemy.

Satisfactory progress has been made in the construction of the gun factory at Watervliet, N. Y., in the manufacture of type guns of the highest qualities, and in the manufacture of service mortars, and their emplacement at the most exposed and important positions upon the seacoast, while contracts have been made for the material necessary for the construction of large numbers of guns and mortars, and for the purchase of completed guns of the highest type. It will only require moderate annual appropriations for the next few years to place the extended seacoast of this country in such condition that no foreign enemy could inflict upon it any serious loss or damage. When this is accomplished, the dignified and just policy which this country has adopted toward all foreign nations may be steadily adhered to without apprehension of results unfavorable either to the welfare or to the honor of this country.

INDIANS IN THE ARMY.

It is assumed, as a general principle of military policy, that all of the permanent inhabitants of the country, without respect to race or previous condition, should in time of war furnish their fair proportion of the military forces of the country, and, with this end in view, that all should have representation in the permanent establishment. It has also been demonstrated by experience, as well as by reason, that one of the most effective and most rapid methods of civilizing the savage

tribes of a country, and converting them from enemies into friends, is to receive a reasonable proportion of them into the military service of the country. With these ends in view it has been decided by the War Department to enlist a fair proportion of the Indians of the western Territories, and organize them into regular companies as component parts of the existing regiments of cavalry and infantry. Although this policy has not yet progressed very far in its execution, the results have been entirely satisfactory, and it is recommended that it be adhered to until the American Indian constitutes a due proportion of the enlisted strength of the Army.

MILITARY INSTRUCTION.

The Artillery School at Fort Monroe maintains the high state of efficiency which has heretofore characterized it, and which has resulted from many years of earnest effort on the part of the officers of artillery, supported and encouraged by the War Department. Through it every young officer of artillery may now receive, in due time, that thorough scientific education which is necessary to the efficiency of the artillery service under the greatly changed modern conditions, and those officers having special aptitude and ambition may pursue their scientific military studies without limit.

The Infantry and Cavalry School at Fort Leavenworth has been steadily developed until its condition approaches closely to the ideal standard which has been set for it. Its opportunities are now sought for by young officers, as a means of gaining that higher education in the science of war which is essential to the satisfactory performance of the higher duties of the staff, and of the command of large bodies of troops in time of war.

The law of Congress requiring examinations for promotion in the line of the Army has also given a much-needed stimulus to the young officers to pursue their military studies, and will in the end undoubtedly serve to improve very largely the general state of military education. This good result will be accomplished with the elimination from the service of only the very few who are incapable from constitutional defects of intellect or character from becoming good officers.

An advance has also been made in the direction of general education in the Army through the regulation which makes attendance upon the post schools on the part of such enlisted men as may be selected for the purpose a military duty, as well as their instruction by such officers and noncommissioned officers as may be detailed for that duty. It is confidently believed that these measures have placed the system of education in the Army on a very satisfactory basis, and that it only requires development, which will come in due time. It is respectfully recommended that Congress continue to make a small annual appropriation for the support of the Infantry and Cavalry School at Fort Leavenworth, as well as for the Artillery School at Fort Monroe, so that all the essential military schools may have the direct recognition and support of Congress.

PRACTICAL INSTRUCTION IN ARTILLERY AND IN SMALL ARMS.

During the year the practice of the infantry and cavalry troops with the rifle, carbine, and revolver has been carried out with the same zeal which has characterized this branch of instruction in preceding years. A few modifications have been made in the small-arms firing regulations. (See General Order, No. 143, Adjutant-General's office, of 1890.) These in brief are, optional practice by officers after having attained thorough proficiency in the use of their arm; discontinuance of monthly

reports of target firing and monthly target orders; abolition of division competitions; introduction of target "K" (the silhouette of a mounted soldier) in revolver firing, and some minor changes in the course of instruction for practice with the revolver; number of cavalry competitions increased from three to four; competitions for distinguished marksmen made annual instead of biennial; allowance of ammunition doubled for revolver practice.

The relative standing of the troops in this branch of instruction can not be determined in advance of the reports, which are not due until October 31; but the results of the annual competitions indicate the same proficiency in firing as heretofore.

Progress in light artillery and seacoast artillery instruction continues to be satisfactory, though the latter suffers unavoidable discouragement from the lack of modern material. It is, therefore, the more pleasant to note the very successful experiment made during the year with the object of obtaining the best possible instruction from the use of the present unsatisfactory equipment. This has been the institution of a series of competitions in the artillery regiments, in which stress has been laid, not so much on the results of actual firing, as upon the general training of the gunners, upon their proficiency in those general principles which will render them quick to make profitable use of more modern material whenever it may be supplied. The continuance of these competitions, the cost of which is almost nothing, should be specially encouraged.

The following military posts being no longer necessary have been abandoned since the last annual report: Forts Abraham Lincoln, N. Dak.; Davis, Tex.; Lowell, Ariz.; Marcy, N. Mex.; Shaw, Mont.; Selden, N. Mex.; Union, N. Mex., and Fort Lewis, Colo. These added to the number practically abandoned during the last two years and previously reported amount to twenty-eight military posts. Fort Bidwell has been temporarily reoccupied by a small force. This serves largely to mark the advance which has been made in the settlement of the western Territories and the subjugation of the roaming Indians which formerly impeded that settlement. The garrisons of the several abandoned posts have been united in those of a more permanent character, giving larger garrisons, and consequent increased efficiency and economy in the administration. It is anticipated that a few additional frontier posts may be abandoned within the next few years.

Liberal allowance should be made for the additional barracks, quarters, and stables rendered necessary by this increase of garrison, at the more permanent and important posts. The money thus expended will very soon be saved to the Treasury in the increased economy resulting from the concentration of the troops, and the annual saving will thereafter be permanent.

The legislation of the last Congress affecting the personnel of the Army has been greatly beneficial in its effects. What remains most to be desired is the reorganization of the infantry and artillery, heretofore referred to, and a reasonable increase in the compensation, and consequent dignity, of the noncommissioned officers of the line. In this country the difference between the lowest commissioned grade and the highest noncommissioned has always been too great. This disparity has been made still more apparent, in recent years, by the progress of general education, and such improvements in the art of war and the tactics of armies as have imposed much more important duties and responsibilities than formerly upon noncommissioned officers of the line. *I respectfully recommend that the pay of these noncommis-*

sioned officers be increased, so as to equal those of like grades in the Corps of Engineers.

I respectfully invite attention to the detailed reports of the several department commanders, commanding officers of the military schools, and those of the Adjutant-General and Inspector-General, which I will not attempt to summarize or refer to in detail.

The remarks of Maj. Gen. Howard, commanding the Department of the East, respecting the necessity of a fortified seaport at some point on the Southern Atlantic coast of the country are worthy of special consideration; also those of Brig. Gen. McCook, commanding the Department of Arizona, respecting the necessity for the fortification and armament of the port of San Diego, Cal. The necessities of other and more prominent seaports are too well known to need special mention.

All the reports show that the general state of discipline in the Army is excellent, the one lamentable exception being that of the Fourth Cavalry at Fort Walla Walla. The measures which have been adopted for the improvement of the condition of the enlisted men and for the exclusion of undesirable characters from enlistment have worked together to elevate the character and increase the contentment of the soldiers, without in any measure, it is believed, impairing their efficiency. The winter campaign against the Sioux developed the most cheerful endurance of the greatest hardships, as well as great gallantry in action, and a total absence of desertions while in the field in the presence of the enemy.

The sanitary condition of the Army has also been excellent during the past year. In this connection facts disclosed by special report of the Surgeon-General to the Adjutant-General of the Army are worthy of note, as showing the beneficial effect of the special care of invalid soldiers by their transfer either to the Army and Navy General Hospital at Hot Springs, or by a change of station to hospitals other than those where their disability was first reported. More than half of all such invalids who would otherwise have been discharged from the service have been restored to military duty. This measure and the great efficiency shown by the medical department during the winter campaign are worthy of high commendation.

The readiness of the Army for active field service in an emergency has long been greatly impaired by the reduction of means of transportation to that which is required for the ordinary post service, making it necessary to procure, by whatever means may be available, the transportation required for troops in the field. Though this condition is always to be regretted, it is a source of no little satisfaction that the Quartermaster's Department was able during the recent campaign to supply by contract, or otherwise, the requisite means of transportation without great or injurious delays in the movement of troops.

The Commissary Department and the Ordnance Department were, as usual, efficient in making the necessary provisions for the supply of the troops in the field, and I take pleasure in expressing my high appreciation of the manner in which all the staff departments of the Army discharged their duties under these extraordinary circumstances, as well as of the manner in which the officers of those departments on duty in Washington have cordially assisted the Commanding General of the Army in carrying out the instructions of the Secretary of War and of the President.

I have the honor to be, sir, your obedient servant,

J. M. SCHOFIELD,
Major-General Commanding.

Hon. REDFIELD PROCTOR,
Secretary of War.

REPORT OF THE ADJUTANT-GENERAL.

The number of enlisted men now in service June 30, 1891, who are drawing increased pay under the act of Congress of August 4, 1854, is as follows:

Five years' continuous service (\$2 per month).....	4,393
Ten years' continuous service (\$3 per month).....	1,597
Fifteen years' continuous service (\$4 per month).....	964
Twenty years' continuous service (\$5 per month).....	752
Twenty-five years' continuous service (\$6 per month).....	120
Thirty years' continuous service (\$7 per month).....	4
Thirty-five years' continuous service (\$8 per month).....	1
Forty years' continuous service (\$9 per month).....	1

The number of those who will become entitled to increased pay under the act of Congress of May 15, 1872, during the fiscal year ending June 30, 1893, is—

Reenlisted pay	367
One dollar per month for third year of service	3,493
Two dollars per month for fourth year of service.....	3,318
Three dollars per month for fifth year of service.....	1,558

And the number of enlisted men whose terms will expire during the fiscal year ending June 30, 1893, is 2,538.

The officers of the Adjutant-General's Department are properly assigned and in the discharge of their appropriate duties.

DESERTIONS.

It is with much satisfaction that the Adjutant-General reports a marked reduction during the past year in the number of desertions from the Army. In 1889, the number reported was 2,835, in 1890 it was reduced to 2,344, while the entire number during the past year is 1,503, or 841 less than during the preceding year and a little more than one-half of the number reported in 1889. Deducting the five desertions from the Indian scouts employed in the Department of the Platte and 71 from the several rendezvous, etc., the actual number of desertions from the organized commands of the Army is 6.2 per cent. of their total mean strength.

I recommend that all honorably discharged enlisted men of 15 years' service, of temperate habits and who have served honestly and faithfully, be given a bounty of \$200; that all who serve 10 years under similar circumstances be given a bounty of \$100. During the next 5 years annual appropriations amounting to \$352,500 would be necessary to meet this liability should these bounties be authorized by law.

SUMMARY OF RECOMMENDATIONS.

As a means of calling special attention to the needs of the military service, I submit this summary of the several recommendations and suggestions contained in this report and in my report to the Secretary of War, viz:

REPORT TO THE SECRETARY OF WAR.

Renewal of oath of enlistment after the soldier joins his regiment.
Increase of pay to noncommissioned officers and the appointment of

fifty "post sergeant majors." The increased expense would be almost \$228,000 annually.

Increase of pay (\$3 per month) to men granted "medals of honor." This will require an appropriation of \$2,736 per annum.

Civil employment for honorably discharged soldiers of not less than 10 years' service in the Bureaus of the War Department in Washington City, and at large. There are some 7,000 positions, comprising clerks, watchmen, messengers, laborers, etc., to which such men could be appointed.

REPORT TO THE MAJOR-GENERAL COMMANDING.

Semi-monthly payments.

To increase the efficiency of post schools, and to enlist for each post a fully qualified schoolteacher, to receive the pay and allowances of a hospital steward. This would require an appropriation of \$60,000 per annum.

To establish libraries at all permanent posts and that an annual appropriation of \$10,000 be asked for the purpose.

To organize a United States Service Corps, to consist of clerks, mechanics, teamsters, bakers, cooks, and laborers, and to abolish extra-duty labor.

The amount paid for "extra-duty pay," with the addition thereto of the regular pay received by men so detailed will, it is believed, cover the expense of such a corps, consisting of 1,200 to 1,400 men.

That an annual appropriation of \$100,000 be made for gymnasiums for permanent posts.

That suitable buildings be provided for the post canteens and amusement rooms.

That the maximum age for the enlistment of men be reduced from 35 to 30 years and that the length of service of private soldiers be limited to 15 years, retaining only noncommissioned officers until retired.

That captains of artillery and infantry on the march and in the field be mounted by the Quartermaster's Department.

That a bounty be given to men on discharge after 10 and 15 years' faithful and efficient service.

This would require \$352,500 annually for the next 5 years.

It is reasonable to believe that if the recommendations and suggestions submitted receive favorable action such contentment will prevail in the Army as will surely go far to counteract the causes and blot out the odious offense of desertion, which so much reduces its efficiency, adds enormously to the expense of recruiting, and is such a drain upon the political power of the country, as shown by the fact of 50,000 men at large disenfranchised and \$28,000,000 lost to the Treasury during the past 24½ years.

I submit these views as not too optimistic when the condition of the Army to-day is compared with its condition two years ago.

Respectfully submitted.

J. C. KELTON,
Adjutant-General.

Maj. Gen. JOHN M. SCHOFIELD,
Commanding the Army.

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REPORT OF MAJ. GEN. HOWARD.

HEADQUARTERS DEPARTMENT OF THE EAST,
Governors Island, N. Y., September 10, 1891.

SIR: I have the honor to submit, for the information of the Major-General Commanding the Army, the following annual report:

CHANGE OF DIVISION TO DEPARTMENT.

In compliance with General Orders, No. 57, Adjutant-General's Office, dated July 3, 1891, the States of Michigan and Indiana were transferred to the Department of the Missouri. This carried the Nineteenth Infantry entire to that department. In other respects the Department of the East has the same territory as had the late Division of the Atlantic. The division then (July 3) ceased to exist.

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COAST DEFENSE.

The policy inaugurated by the Board of Fortifications in its report of 1885, and which has been generally in vogue since and is now being followed by the Government, has been to fortify (1) New York, (2) San Francisco, (3) Boston.

For these cities the Ordnance Department is now making the new guns and mortars needed, and the Engineer Department is at work upon the epnalements, magazines, and bomb-proof spaces. Many fixed torpedoes or submarine mines have already been constructed and stored ready for use.

The next recommendation of the Board was for (4) the lake posts, but the expense and the defenseless state of our neighbor, the Dominion of Canada, has caused the indefinite postponement of this project.

Our coast defense towards the high seas being more needed and in a state much further advanced, it would be absurd to fortify where war is least likely to occur.

The point next recommended by the Board in 1885 was (5) *Hampton Roads* with (8) *Washington* to follow after two other cities. Later, however, the defense of Hampton Roads has been combined with that of Washington, so that by 1893 some of the new guns, it is hoped, will be ready for mounting, and the epnalements for them constructed both at Hampton Roads and on the Potomac below Washington.

The original recommendation of the Board then continued, (6) New Orleans, (7) Philadelphia, (9) Baltimore, (10) Portland, Me., (11) Rhode Island ports in Narragansett Bay.

To render New Orleans secure from attack by reason of its surrounding lakes, long reach of river from the jetties, and lack of firm ground upon which to build fortifications, the problem is peculiar. Light-draft coast-defense gunboats, torpedo boats, and submarine mines, protected by the boats as well as by the guns on shore where possible, seem to furnish the direction in which its defense should be undertaken.

Philadelphia, Baltimore, Portland, and Rhode Island ports will doubtless be reached in due time if Congress continues its yearly appropriations.

I wish, however, in this report to ask attention particularly to the use of *fortified points* as the bases of a proper defense of our national interests in neighboring seas as well as simply a guard to the cities behind

them. And I think the point of plan and work has been reached where this should be considered, our chief cities and the capital being in the way of a proper provision.

Since the commencement of the construction of our new navy Great Britain, for the purpose of preserving her influence in American waters, has strengthened her fleet on our side of the Atlantic by the substitution of vessels of greater power as each change of ships on this station is made.

She has now four harbors, Halifax, Bermuda, Kingston, and St. Lucia, well fortified or being strengthened, well garrisoned, and being interconnected by telegraphic cable. These are so situated along our Atlantic seaboard as to give convenient coaling stations for fleets operating in the north Atlantic and particularly in the West India waters. In case of war these fortified places would give bases from which to operate against the United States.

Besides our own self-protection we have duties to humanity to perform in seeing that civilized government is maintained in certain West Indian islands; or, if not, it is our duty to stand aside, give up the principles of the Monroe doctrine, and permit European powers to do what is necessary. No American desires the latter. We also have the investments of our people in countries with unstable governments to guard from injury. To do this we should be as strong in the neighboring seas as any other power; even as well prepared as England.

To be thus strong in a military way we need not only the ships and foreign coaling stations but fortified harbors at convenient intervals along our entire coast.

In the northern part of my department there has been provided, to be completed according to annual appropriations, such fortified points, viz, Boston, New York, and Hampton Roads.

The next point to receive attention, recommended by the Board of Fortification, is, as we have said, New Orleans, where at Algiers, on the opposite side of the river, there is to be established a dry dock and naval repair station. New Orleans, properly fortified, gives us one strong point on the Gulf of Mexico.

At least one more such fortified port will eventually be necessary on the Gulf, and probably two, say Galveston and Tampa Bay. The building of the dry dock elsewhere will eventually diminish the military importance of Pensacola. These secondary places, however, can wait until more important points are made secure.

But on the Atlantic, south of Hampton Roads, we are now actually defenseless. There are too many cities on this part of the coast to expect to fortify them all; but as far south as possible we should fortify a good harbor, the deepest we can find, to be a refuge for commerce endangered, and to constitute a naval coaling and repair station.

Key West is too isolated, and the communication with it will always be too precarious to make it anything but a secondary outlying point. There is no harbor of any depth on the East Florida coast. The St. Johns River, which is the best, is not likely to be dredged and maintained at sufficient depth to be suitable.

Therefore I recommend the complete defense of the combined harbors of Tybee Roads (Savannah) and Port Royal Sound (Broad River) by works on Tybee, Hilton Head, Parry, and St. Helena islands, with fixed torpedoes, light-draft gunboats, and torpedo boats as accessories.

This would at once protect the most prosperous city in our eastern quarter and render safe the best harbor south of Hampton Roads, and furnish the naval base desired. The Naval Department has already

began the construction of a dry dock opposite Port Royal on Parry Island.

Having this object in view, I recommend that the necessary land be obtained; and, further, that steel guns be mounted as soon as practicable, in order that the artillery forces stationed in the South may have a practice ground better than that furnished by the obsolete material at Barrancas.

As soon as this harbor begins to be properly fortified the artillery regiment stationed in the South can be gradually transferred to permanent quarters on Parry Island, and Fort McPherson be partially garrisoned by infantry, and so held for refuge for all troops on the Gulf of the South Atlantic coast in time of epidemics.

With the present limited number of artillery troops I believe the manning of the defenses of New Orleans, Port Royal, and Tybee Roads to be all that the Army can properly provide in the South.

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DESERTIONS.

The privilege of discharge, the increase to \$60 of the reward for apprehending a deserter, the cards of identification, and the increase of the soldier's daily ration by 1 pound of vegetables, have materially reduced the number of desertions.

The main causes of desertion, ascertained by careful examination at each post, are of a nature to be remedied only by bringing better men than such deserters into the service. The most of them deserted because they were too drunken or too vile to remain with the present enlisted men. A few, of course, yielded to some family claim or hardship which can never be foreseen or remedied.

CANTEENS.

Canteens have been an improvement on post trader's stores, and useful except where the canteen saloon has been placed too near the men's quarters. In this case, the constant presence of beer appears to have tempted otherwise very good noncommissioned officers and men to an excessive indulgence; not to intoxication, perhaps, but to loss of activity and vigor in the discharge of their duties.

The beneficial effect of the canteen at small posts is doubtful. From consultation with officers in charge of these canteens, I am of the impression that the evil that the sale of beer engenders in making it creditable for recruits to drink, more than counterbalances the restraining effect it exercises on the habitual drinkers and confirmed drunkards.

The benefits, however, of the canteen system to large garrisons are numerous. It can be made an excellent market and purchasing agent of perishable and dainty articles for sale and distribution to officers and men which can not be supplied by the commissary.

I decidedly recommend that no soldier, either private or noncommissioned officer, be placed behind the bar to deal out drinks to his comrades. It certainly is demoralizing to have a military subject acting as a barkeeper. It is better in my judgment that the sale be discontinued where it is necessary to so use enlisted men. Of course it is well known that the canteen does not necessarily supply intoxicating drinks.

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POST SCHOOLS.

A year ago I said: "The post school system has not yet obtained a proper status, though a distinct advance has been made." On examining the adjutant-general's report for the department, forwarded herewith, I see no reason to change the above expression. At many posts there is a fair percentage of attendance; at other posts so small a proportion of the garrison attends that I doubt whether or not the progress and interest desired have been reached. It is possible that those who do not attend are by previous education already sufficiently instructed, and that, as is known in some cases, the smaller numbers have been brought up to the standard required. There has been a better supply of books and school furniture than heretofore, but still it is difficult to secure by detail competent and willing teachers.

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OLIVER O. HOWARD,
Major-General, U. S. Army, Commanding.

The ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

Memorandum showing, in detail, the causes of the several desertions reported on the accompanying consolidated report as obtained from the subreports of post commanders.

No cause for desertion known	158
Was in debt	28
Escaped while under charges and in confinement	12
Was dissatisfied with the service	13
Complained of overwork	2
Supposed to have been homesick	5
Had been in the hands of civil authorities when deserted	2
Complained of insufficiency of food	2
Had previously deserted	12
Deserted on account of a woman	7
Deserted for fear of punishment for wrongdoing	8
Desertion due to his marriage in the Army	1
Had bad habits and was shunned by his comrades	3
Was disliked by most all of his comrades	2
Had requested his discharge, but was refused	2
Complained of insufficient pay	2
Enlisted fraudulently and deserted for fear of consequences	1
Was a thief	5
Supposed to have been demented when deserted	1
Was a drunkard	2
Enlisted for temporary support	3
Was dissatisfied in not getting transferred	1
Deserted with a prisoner while on guard over him	2
Supposed to have met with foul play	1
Had the money to purchase his discharge, but spent it	1
Expected to be ordered against the Sioux and did not like to go	1
Feared ridicule of his comrades on account of his bodily ailment	1
Complained of too much school duty	1
Believed to have been a military convict	1

Total

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REPORT OF MAJOR GENERAL MILES.

HEADQUARTERS DEPARTMENT OF THE MISSOURI,

Chicago, Ill., September 14, 1891.

SIR: I have the honor to submit the following annual report of military events and recommendations.

On the 1st day of September, 1890, in accordance with the provisions of General Orders, No. 84, Headquarters of the Army, 1890, conveying the President's orders, I relinquished command of the Division of the Pacific to assume the command of the Division of the Missouri, with headquarters at Chicago, Ill., which was done on the 15th day of September, 1890. The division, by the changes incident to the general order above mentioned, was limited to the Departments of the Platte and Dakota. This was again changed by executive order, contained in General Orders, No. 57, dated Headquarters of the Army, July 3, 1891, abolishing the divisions and assigning me to the command of the Department of the Missouri, which embraces the States of Michigan, Wisconsin, Indiana, Illinois, Missouri, Kansas, and Arkansas, and Oklahoma, and the Indian Territories, with headquarters at Chicago, Ill.

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 CONDITION OF THE CHEYENNE INDIANS IN MONTANA.

While en route to the division headquarters at Chicago I received information at Fort Keogh, Mont., from Cheyenne Indians I had known for many years, of the distressed condition they were in, particularly the tribe of Northern Cheyennes; their suffering for want of food, their being compelled to kill cattle belonging to the white people to sustain life, and the disaffection then existing, as well as the alarm prevailing among the citizens of that State.

To relieve their immediate wants I sent a telegram to the Adjutant-General at Washington stating that the principal trouble with the Cheyenne Indians, whose reservation was south of Fort Keogh, was the result of the Government's failure to provide sufficient food and the means to render them self-supporting; saying when I left there, ten years previous, they had a herd of cattle and were at the time largely self-supporting; that they had been obliged to kill their cattle for food; that they had been on the verge of starvation and were at that time very little better; that when without food, or the means of providing for it, they had been obliged to kill cattle belonging to white men; that there was not the least difficulty in controlling them, but ample means should be appropriated at once to supply them with food and the means to render them self-supporting. At the same time I recommended that funds should also be appropriated to reimburse the white citizens who had been obliged to supply them with food. This telegram resulted in their being granted an additional appropriation of twenty-five thousand dollars, and reasonable appropriations for their necessities.

CAUSE OF INDIAN DISAFFECTION.

The causes that led to the serious disturbance of the peace in the Northwest last autumn and winter were so remarkable that an explanation of them is necessary in order to comprehend the seriousness of the situation. The Indians assuming the most threatening attitude of hostility were the Cheyennes and Sioux. Their condition may be

stated as follows: For several years following their subjugation in 1877, 1878, and 1879 the most dangerous element of the Cheyennes and the Sioux were under military control. Many of them were disarmed and dismounted; their war ponies were sold and the proceeds returned to them in domestic stock, farming utensils, wagons, etc. Many of the Cheyennes, under the charge of military officers, were located on land in accordance with the laws of Congress, but after they were turned over to civil agents, and the vast herds of buffalo and large game had been destroyed, their supplies were insufficient and they were forced to kill cattle belonging to white people to sustain life.

INSUFFICIENT FOOD.

The fact that they had not received sufficient food is admitted by the agents and the officers of the Government who have had opportunities of knowing. The majority of the Sioux were under the charge of civil agents, frequently changed and often inexperienced. Many of the tribes became rearmed and remounted. They claimed that the Government had not fulfilled its treaties and had failed to make large enough appropriations for their support; that they had suffered for want of food, and the evidence of this is beyond question and sufficient to satisfy any unprejudiced, intelligent mind. The statements of officers, inspectors, both of the military and the Interior Departments, of agents, of missionaries, and civilians familiar with their condition, leave no room for reasonable doubt that this was one of the principal causes. While statements may be made as to the amount of money that has been expended by the Government to feed the different tribes, the manner of distributing those appropriations will furnish one reason for the deficit.

FAILURE OF CROPS.

The unfortunate failure of the crops in the plains country during the years of 1889 and 1890 added to the distress and suffering of the Indians, and it was possible for them to raise but very little from the ground for self support; in fact, white settlers have been most unfortunate, and their losses have been serious and universal throughout a large section of that country. They have struggled on from year to year; occasionally they would raise good crops, which they were compelled to sell at low prices, while in the season of drought their labor was almost entirely lost. So serious have been their misfortunes that thousands have left that country within the last few years, passing over the mountains to the Pacific slope or returning to the east of the Missouri and the Mississippi.

The Indians, however, could not migrate from one part of the United States to another; neither could they obtain employment as readily as white people, either upon or beyond the Indian reservations. They must remain in comparative idleness and accept the results of the drought—an insufficient supply of food. This created a feeling of discontent even among the loyal and well-disposed and added to the feeling of hostility of the element opposed to every process of civilization.

DISAFFECTION AT STANDING ROCK AGENCY.

Reports forwarded by Brig. Gen. Rager, commanding Department of Dakota, contain the following:

The commanding officer at Fort Yates, N. Dak., under date of December 7, 1890, at the time the Messiah delusion was approaching a

climax says, in reference to the disaffection of the Sioux Indians at Standing Rock Agency, that it is due to the following causes:

(1) Failure of the Government to establish an equitable southern boundary for the Standing Rock Agency Reservation.

(2) Failure of the Government to expend a just proportion of the money received from the Chicago, Milwaukee and St. Paul Railroad Company for right of way privileges, for the benefit of the Indians of said agency. (Official notice was received October 18, 1881, by the Indian Agent at the Standing Rock Agency, that the said railroad company had paid the Government, under its agreement with the Sioux Indians, for right of way privileges, the sum of \$13,911. What additional payments, if any, have been made, by the said railroad company, and what payments have been made by the Dakota Central Railroad Company, the records of the agency do not show. In 1883, and again in 1885, the agent, upon complaints made by the Indians, wrote the Commissioner of Indian Affairs, making certain recommendations as regards the expenditure of the money received from the said railroad company, but was in each instance informed that until Congress took action with respect to the funds referred to nothing could be done. No portion of the money had been expended up to that time (December, 1890) for the benefit of the Indians of the agency, and frequent complaints had been made to the agent by the Indians because they had received no benefits from their concessions to the said railroad companies).

(3) Failure of the Government to issue the certificates of title to allotments, as required by Article 6 of the treaty of 1868.

(4) Failure of the Government to provide the full allowance of seeds and agricultural implements to Indians engaged in farming, as required in Article 8, treaty of 1868.

(5) Failure of the Government to issue to such Indians the full number of cows and oxen provided in Article 10, treaty of 1868.

(6) Failure of the Government to provide comfortable dwelling houses for the Indians, as required in Article 6, treaty of 1876.

(7) Failure of the Government to issue to the Indians the full ration stipulated in Article 5, treaty of 1876. (For the fiscal year beginning July 1, 1890, the following shortage in the rations were found to exist: 485,275 pounds of beef [gross], 761,212 pounds of corn, 11,937 pounds of coffee, 281,712 pounds of flour, 26,234 pounds of sugar, and 39,852 pounds of beans. Although the obligations of the Government extend no further than furnishing so much of the ration prescribed in Article 5 as may be necessary for the support of the Indians, it would seem that, owing to the almost total failure of crops upon the Standing Rock Reservation for the past four years and the absence of game, the necessity for the issue of the full ration to the Indians here was never greater than at the present time, December, 1890.)

(8) Failure of the Government to issue to the Indians the full amount of annuity supplies to which they are entitled under the provisions of Article 10, treaty of 1868.

(9) Failure of the Government to have the clothing and other annuity supplies ready for issue on the first day of August of each year. Such supplies have not been ready for issue to the Indians, as a rule, until the winter season is well advanced. (After careful examination at this agency, the commanding officer is convinced that not more than two-thirds of the supplies, provided in Article 10 have been issued there, and the Government has never complied with that provision of Article 10 which requires the supplies enumerated in paragraphs 2, 3, and 4 of

said article to be delivered on or before the first day of August of each year. Such supplies for the present fiscal year, beginning July 1, 1890, had not yet reached (December, 1890) the nearest railway station, about 60 miles distant, from which point they must, at this season of the year, be freighted to this agency in wagons. It is now certain that the winter will be well advanced before the Indians at this agency receive their annual allowance of clothing and other annuity supplies.)

(10) Failure of the Government to appropriate money for the payment of the Indians for the ponies taken from them, by the authority of the Government, in 1876.

In conclusion, the commanding officer says:

It, however, appears from the foregoing that the Government has failed to fulfill its obligations, and in order to render the Indians law-abiding, peaceful, contented, and prosperous it is strongly recommended that the treaties be promptly and fully carried out, and that the promises made by the Commission in 1889 be faithfully kept."

DISAFFECTION AT PINE RIDGE AGENCY.

Under date of November 30, 1890, Gen. John R. Brooke, commanding Department of the Platte, after having investigated the cause of disaffection among the Indians, says of those at the Pine Ridge Agency that—

The act of Congress approved February 28, 1877, provides for a ration whose proportion of different articles of food are fixed for these Indians, and the act directs that such ration shall be continued to them, or so much of said ration as may be necessary, until the Indians are able to support themselves. In 1888 the annual beef issue authorized by the Commissioner of Indian Affairs was 5,000,000 pounds. In 1889 the issue was 4,000,000 pounds. There was no decrease in the number of Indians in that one year to account for this reduction of 1,000,000 pounds of beef. The attention of the Sioux Commission was called to this fact by the agent here, and they promised him to reestablish the amount of 5,000,000 pounds. On the strength of this promise the agent issued on the basis of 5,000,000 pounds. The promise was not redeemed, and the inevitable deficiency resulted.

In a letter of April 12, 1890, of Mr. Gallagher, agent here, to the Commissioner of Indian Affairs, he states that the monthly issue of beef at that time is 205,000 pounds, whereas by the treaty the ration would be 470,400 pounds, a deficiency per month of 265,400 pounds in that called for by the treaty, or a reduction of more than one-half the proper treaty allowance. The following is an extract from the reply to this letter, which is dated April 21, 1890: "It is better to issue half rations all the time than to give them three-fourths or full rations during two months and none for the balance of the year." The Commissioner further states in the same letter that the Interior Department is able to furnish such articles as shoes, shawls, blankets, ticking, gingham, etc., as an equivalent, in lieu of subsistence, or in lieu of parts of the ration as fixed by the treaty referred to. The act of Congress fixing the rations says, "and for every 100 rations 4 pounds of coffee, 8 pounds sugar, and 3 pounds of beans, or in lieu of said articles, the equivalent thereof, in the discretion of the Commissioner of Indian Affairs, such rations, or so much thereof as may be necessary, shall be continued." It is thought that when the Commissioner interprets the words (when the ration only is spoken of) 'or in lieu of said articles the equivalent thereof, to mean shoes, shawls, blankets, etc., that the Commissioner is in error, and that the resultant reduction in food is in violation of the act of Congress. The enormous reduction in the beef issue at this agency, which is the principal supply of food, is shown by the following figures:

In the year 1886 the annual authorized issue was 8,125,000 pounds; in 1889 it was 4,000,000 pounds, a reduction of 4,125,000 in three years, or an average annual reduction of 1,378,333 pounds; or in other words, in that space of time, the beef issue has been reduced largely over one-half, and it is known that there has been no such corresponding reduction in the number of Indians, or advancement in their ability to support themselves, as the land in the vicinity of this agency and adjacent to it is not sufficiently good for agricultural purposes, except by irrigation. I do not consider, however, that these reductions in subsistence are sufficient grounds for the attitude recently assumed by large numbers of these Indians. A part of them who are subject to the same conditions in this respect are not in anywise disaffected, though they deplore the inadequacy of the food supply. The disaffected are those

who are under the influence of Kicking Bear and his supporters. The ghost dance appears to be a means to an end, viz, to draw under the influence of Kicking Bear and his lieutenants such of the young men as can be won over by means of the excitement of this dance.

In regard to complaints of broken promises, Gen. Brooke invites attention to the following statement of American Horse, speaking for himself and voicing the sentiment of four other chiefs present, as embodied in a letter of Indian Agent Royer to the Acting Commissioner of Indian Affairs, dated November 17, 1890, in which the Indian says:

I was speaker for the whole tribe. In a general council I signed the bill (the late Sioux bill) and 580 signed with me, the other members of my band drew out, and ever since these two parties have been divided. The nonprogressive started the ghost dance to draw from us. We were made many promises, but have never heard of them since. The Great Father says if we do what he directs it will be to our benefit, but instead of this they are every year cutting down our rations and we do not get enough to keep us from suffering. * * * After we signed the bill they took our land and cut down our allowances of food. The commissioners made us believe that we would get full sacks if we signed the bill, but instead of that our sacks are empty. Our chickens were all stolen; our cattle, some of them were killed. Our crops were entirely lost by being here with the Sioux Commission, and we have never been benefited one bit by the bill, and, in fact, we are worse off than we were before we signed the bill.

We are told if we do as white men we will be better off, but we are getting worse off every year. The commissioners promised the Indians living on Black Pipe and Pass creeks, that if they signed the bill they could remain where they were and draw their rations at this agency, showing them on the map the line, and our people want them here, but they have been ordered to move back to Rosebud Agency. This is one of the broken promises. The Commission promised to survey the boundary line and appropriate funds for the purpose, but it has not been done. When we were at Washington, the President, the Secretary of the Interior, and the Commissioner, all promised us that we would get the million pounds of beef taken from us, and I heard the bill appropriating the money passed Congress but we never got the beef. The Commissioner refused to give it to us. American Horse, Fast Thunder, and Spotted Horse, were all promised a spring wagon each, but they have never heard anything of it; this is another broken promise.

In reference to the above remarks by American Horse, Gen. Brooke says: "If these promises were made, and I have no reason to doubt it, there are reasonable grounds for complaint," and—

It is a notable feature that in the division of these Indians into well-disposed and disaffected, the former are those called "progressive" and favored the Sioux bill, and the latter are "nonprogressive" and were the opponents of the bill. It is impracticable to reduce the complaints of the Indians to details at this time. The records of the Indian Bureau, I believe, from what I hear at this agency, must contain all this matter; more frequent issues, however, should be made, as too long a time elapses from issue to issue, and an Indian does not, or will not, understand the necessity for care in the use of his food; he always eats up his two weeks' supply in ten days or less, and, as a consequence, goes hungry the rest of the time, and it should be noted that by irrigation it is always possible to raise a crop in this section, whereas without irrigation it is almost an impossibility.

In addition to disarming the Indians, I would recommend that the broken or deferred promises be made good, that the food of those living in regions where the white man's crops have failed, with its consequent impoverishment, be increased, that this may in time render the Indians "law abiding and peaceable" and ultimately, I hope, "contented and prosperous." These general remarks apply equally to the Indians of the Rosebud Agency. It must be borne in mind that the Interior Department in making its issue of beef makes no allowance for loss in weight, an animal weighing 1,000 pounds at date of purchase, is issued at that weight, regardless of the actual weight, no estimated or actual loss is considered. During the winter months there is a large shrinkage in the amount of meat which comes from the edible part of the animal.

DISAFFECTION AT ROSEBUD AGENCY.

The officer, in compliance with instructions to report upon the status of the Indians at the Rosebud Agency, November 27, 1890, stated that—

Under treaty the United States Government agree to supply the Rosebud Indians with 3 pounds of fresh beef per day (gross weight) for each person. These cattle

are usually delivered at the agency in the month of October, the season of the year when cattle are in the best condition. A calculation is then made, averaging the cattle for the year's issue. The loss in weight in these cattle from October to February is about 35 per cent, or a beef weighing 1,000 pounds in October will weigh but 700 gross in February, and dress, possibly, 300 pounds. Two issues are made during the month of one beef to every thirty people, or about 10 ounces per man per day.

In October last 3,499,810 pounds of beef were delivered at the agency with instruction that this supply must be made to last until June 30, 1891, whereas the actual quantity these Indians are entitled to for this period is 4,384,926 pounds. I have also learned there has been quite a heavy reduction in the allowance of sugar and coffee for the year. Up to the time of the taking of the census, 2,700 rations in excess of the actual number of Indians was delivered at the agency for issue, so it is presumed they were well fed up to that time. The total number of Indians belonging to the agency is 5,354. Two Strike, Crow Dog, White Horse, Short Bull, and Lance are the leaders of these Indians. They have always been more or less troublesome and in my opinion should be arrested and sent to some military post.

The officer further said :

I have obtained information from a reliable source that the Indians at Rosebud do not now, nor never have received the full treaty ration. The ration of beef issued early in the fall, just after the delivery of cattle, comes nearer the full ration than at any other season of the year. The average ration of beef for the year will not exceed 8 ounces per capita.

Another officer reports, under date of November 29, 1890, that the beef ration was cut down ten years ago, that it was again reduced last year, and the allowance has been reduced for the period from October 1, 1890, to June 30, 1891, 900,000 pounds. He further says that Hollow-horn-bear (a prominent Indian) has stated it as his belief that the ghost dance, which is popular because it is a *feast* to which the hungry and starving Indians are attracted, and where they are fed, would cease if the people received sufficient rations to live upon. The Indian mentioned asserts, from experience under civil and military administrations at Indian agencies, that if an army officer was appointed agent at Rosebud and Pine Ridge agencies and supplied with the treaty allowances of food and goods, the trouble would end in a few days. The last Commission promised to see that these Indians were supplied with cows, that they themselves might go into the cattle business, but none have been furnished. Their crops have failed utterly; few receive any money with which to supply the deficiency in food; the cattle are poor and short in weight; the issue by weight is in some cases impracticable, for the camps are more or less remote; but an ingenious mind ought to devise a system by which, even in these cases, a sufficient allowance of beef could be secured in the winter months.

I believe in the canteen or coöperative system, and know of no reason why the Interior Department should not establish stores, supplies, etc., to be sold to the Indians at reasonable prices on an improved army commissary system. We know how even intelligent men allowed themselves to be imposed upon by post traders, and I know of cases where the imposition of Indian traders upon starving Indians was impossible of definition; i. e., where a trader charged and received one dollar in good and lawful money for one dozen "hard tack" crackers. I find that cord wood here is bought from Indians at six dollars a cord, one by one as it happens to come in, but the Indian is paid on an order out of the trader's store—at trader's prices.

DISAFFECTION AT CHEYENNE RIVER AGENCY.

The commanding officer at Fort Bennet, S. Dak., reports two classes of Indians, one of which is opposed to everything civilized, giving vent to their grievances at every meeting of the Indians on ration day; the other class, comprising a large majority of the Indians of the reservation, have accepted the situation forced upon them, and have been for

years bravely struggling in the effort to reconcile themselves to the ways of civilization and moral progress, with a gratifying degree of success. It is this class whose complaints and grievances demand considerate attention. They claim, in true Indian style, that they only have kept faith in all treaties made with them, and that somehow the treaties when they appeared in print were not in many respects the treaties which they signed.

They complain principally: (1) That the boundaries of the reservation in treaty of 1877 are not what they agreed to and thought they were signing on the paper, and they specially emphasize the point that the line of the western boundary should be a straight line at the Black Hills, instead of as it appears on the maps; (2) that they have never received full recompense for the ponies taken from them in 1876; (3) that the game has been destroyed and driven out of the country by the white people; (4) that their children are taken from them to Eastern schools and kept for years, instead of being educated among them; (5) that when these Eastern graduates return to them with civilized habits, education, and trades, there is no provision made on the reservation for their employment and improvement, to the benefit of themselves and their people; (6) that the agents and employés sent out to them have not all been "good men" and considerate of their (the Indians) interests and welfare; (7) that the issue of their annuity goods is delayed so late in the winter as to cause them much suffering; (8) that they are expected to plow the land and raise grain when the climate will not permit them to reap a crop. They think cattle should be issued to them for breeding purposes, instead of farming implements for useless labor; (9) that the rations issued to them are insufficient in quantity, and frequently (beef and flour) very poor in quality.

Complaints 2, 3, 4, 5, 7, 8, and 9 are well founded and are justified by the facts in each case, No. 9 specially so, and this through no fault or negligence of the agent. The agent makes his annual estimate for sustenance in kind for the number of people borne on his rolls, based on the stipulated ration in treaty of 1877. This estimate is modified or cut down in the Indian Commissioner's office to meet the requirements of a limited or reduced Congressional appropriation, and when it returns to the agent's hands *approved* he finds that he has just so many pounds of beef and flour, etc., placed to his credit for the year, without regard to whether they constitute the full number of treaty rations or not. There is no allowance given him for loss by shrinkage, wastage, or other unavoidable loss, and with the very best efforts and care in the distribution throughout the year of this usually reduced allowance, there can not be issued to each Indian his treaty ration, nor enough to properly sustain life.

As a general thing the Indians of this reservation have been compelled to purchase food, according to their means, between ration issues; those having no means of purchase have suffered. The half pound of flour called for by the treaty ration could not be issued in full, and the half pound of corn required has never been issued, nor anything in lieu of it. In the item of beef but 1 pound was issued instead of the pound and a half called for in the treaty, and during the early spring months, when the cattle on the range are thin and poor, the pound of beef issued to the Indians is but a fraction of the pound issued to him on the agent's return, and under the system of purchase in practice the present fiscal year must necessarily be so. The agent's purchase of beef supply on the hoof for the year, under contract, is closed in the month of November, from which time he has to herd them the balance

of the year as best he can. He is responsible for the weight they show on the scale when *fat and in prime condition*, so that a steer weighing 1,200 pounds in the fall must represent 1,200 pounds in April, while in fact it may be but skin, horns, and bones, and weigh scarcely 600 pounds, while he has done his best to care for them during the severity of a Dakota winter. The Indians do not understand why they should be made to suffer all this shrinkage and loss, and it is a useless and humiliating attempt to explain. The agent is not to blame. The Department of Indian Affairs can do only the best it can with a limited and tardy appropriation.

The remedy in the matter of food supply seems to be a sufficient and early appropriation of funds. All contracts for the beef supply should call for delivery when required by the agent. The agent should be allowed a percentage of wastage to cover unavoidable loss in issue by shrinkage and wastage. The Government should bear the loss and not the Indians. In conclusion, the commanding officer remarks that—

This reservation is not agricultural land. The climate makes it a grazing country. The Indians now can raise cattle successfully and care for them in winter. All attempts at general farming must result in failure on account of climatic conditions.

DISAFFECTION OF YANKTONNAIS.

Under date of December 6, 1890, the commanding officer at Fort Randall, S. Dak., reports that he witnessed the issue of rations at the Yanktonnais Indian Agency, and that it has been gradually reduced, forcing the Indians to become self-sustaining to some extent. He said they suffered very much the past season on account of drought, failure of crops, etc., and if something is not speedily done these Indians will perish from famine.

The rations issued for seven days were barely enough for two days, and within his knowledge, during eight years service at the post, Indians have been saved from suffering by eating refuse from soldiers' tables. They can get but little from this source now, as there is but one company at the post. The Indians claim that funds received for right of way of crossing at Pipestone (\$17,000) have not been divided, and that balance of pay due Sully's scouts has not been paid; that the flour mill at the agency has not been used for two years, being out of repair. Gen. Ruger, in forwarding this report, says that suffering will befall these Indians unless increase of allowance is provided, and states that these Indians are most worthy.

The commanding officer at Fort Washakie, Wyo., under date of November 28, 1890, states that the rations given the Shoshones is insufficient, it consisting only of a half pound of flour, about 14 ounces of beef, yeast powder, salt, and a small quantity of soap.

REPORTS OF INDIAN INSPECTORS.

An Indian inspector, in reporting to the Secretary of the Interior, under date of April 7, 1890, gives it as his opinion that it is a bad plan and a great injustice to receive beef in October at its full weight and issue it on that basis in January following, the Indians thereby losing over one-third, for which their money has been paid. He calls attention to the fact that the whites are now occupying Sioux lands secured under treaty made by the commissioners of 1889, and that the Indians do not get as much as they did before the land was taken.

Under date of November 2, 1890, Special United States Indian Agent E. B. Reynolds calls attention of the Commissioner of Indian Affairs to the extremely disaffected and troublesome state of a portion of the Indians on the Rosebud and other Sioux agencies. He says:

The coming new order of things, as preached to this people during the past seven months, is the return to earth of their forefathers, the buffalo, elk, and all other game, the complete restoration of their ancient habits, customs, and power, and the annihilation of the white man. This movement, which some three weeks ago it was supposed had been completely abandoned, while not so openly indulged in, is continually gaining new adherents, and they are daily becoming more threatening and defiant of the authorities. This latter phase of the case may in a measure be attributed to the scant supply of rations, to which my attention has been almost daily called by the Indians and especially to the reduction in the quantity of beef, as compared to the issues of former years. They kill cows and oxen issued to them for breeding and working purposes, making no secret of doing so, and openly defy arrest. They said that the cattle were issued to them by the "Great Father," and that it is their right to do as they please with them. This evil is increasing daily, and if not checked there will be but very few of this class of stock left on the reservation by spring.

During the past week it was reported to me that two Indians in the Red Leaf camp, on Black Pipe Creek, had killed their cows for a feast at the ghost dance. I sent a policeman to bring them in; they refused to come. The following day I sent two officers and eight policemen and they returned without the men, reporting that after they arrived at the camp they were surrounded by seventy-five or more Indians, well armed and with plenty of ammunition, and they unanimously agreed that an attempt to arrest the offenders would have resulted in death to the entire posse. On Friday I sent the chief of police, with an interpreter, to explain matters and endeavor to bring the men in. They positively refused to come, and the chief of police reports that the matter is beyond the control of the police. This is one case, which could be repeated indefinitely by attempting the arrest of parties guilty of the same offense.

The religious excitement, aggravated by almost starvation, is bearing fruits in this state of insubordination. Indians say they had better die fighting than to die a slow death of starvation, and as the new religion promises their return to earth, at the coming of the millenium, they have no great fear of death. To one not accustomed to Indians it is a hard matter to believe the confident assurance with which they look forward to the fulfillment of the prophet's promises. The time first set for the inauguration of the new era was next spring, but I am reliably informed that it has since, and only lately, been advanced to the new moon after the next one, or about December 11. The indications are unmistakable; these Indians have within the past three weeks traded horses and every thing else they could trade for arms and ammunition, and all the cash they become possessed of is spent in the same way. One of the traders here reports that Indians within the last two days, have come into his store and offered to sell receipts for wood delivered at the agency, and for which no funds are on hand to pay them, for one-third of their value in cash. When asked what urgent necessity there was for such sacrifice of receipts for less than their face value, they answered that they wanted the cash to buy ammunition.

These are some of the signs of the times, and strongly indicate the working of the Indian mind. To me there appears to be but one remedy (and all here agree with me) unless the old order of things (the Indians controlling the agency) is to be re-established, and is that a sufficient force of troops to prevent the outbreak which is imminent, and which any one of a dozen unforeseen causes may precipitate.

THE MESSIAH DELUSION.

In this condition of affairs, the Indians, realizing the inevitable, and seeing their numbers gradually diminishing, their strength and power weakening, very naturally prayed to their God for some supernatural power to aid them in the restoration of their former independence and the destruction of their enemies. It was at this stage of affairs, when driven to desperation, they were willing to entertain the pretensions or superstitions of deluded, fanatical people living on the western slope of the Rocky Mountains, whose emissaries first secretly appeared among the Indians prior to 1889. It was not, however, until the autumn of that year that the widespread conspiracy assumed serious character.

They first aroused the curiosity of the Indians by some secret method scarcely realized by the savages themselves and persuaded delegations from different tribes of Indians to leave their reservations in November, 1889.

It is remarkable that by concerted action the delegations from the different tribes secretly left the various reservations, some starting from points a thousand miles apart from others, and some traveling 1,400 miles into a country entirely unknown to them, and in which they had never been before. The delegations from the Sioux, Cheyennes, and other tribes, secretly leaving their reservations, met at and traveled through the Arapahoe and Shoshone Reservations in Wyoming, and thence via the Union Pacific they passed into Utah, and were joined by Gros Ventres, Utes, Snakes, Piegiens, Bannocks, Pi-Utes, and others, until they came to a large conclave of whites and Indians, near Pyramid Lake in Nevada, where not less than sixteen prominent tribes of Indians were represented. These delegates were then told that "those present were all believers in a new religion," that "they were all oppressed people," that "the whites and Indians were all the same, and that "the Messiah had returned to them." So well was this deception played by men masquerading and personating the Christ that they made these superstitious savages believe that the so-called Christ could speak all languages, that the whites who were not of their faith were to be destroyed, and that all who had faith in the "new religion" would occupy the earth; that the Messiah would cover the earth with dust and would then "renew everything as it used to be and make it better." He told them also that all of their dead would be resurrected; that they were all to come back to earth again, and that as the earth was too small for them and us he would do away with Heaven and make the earth large enough to contain all of them, and that they must tell all the people they meet about those things. He (or they who were personating one being) spoke to them about fighting, and said that was bad and that they must keep from it, that the earth was to be all good hereafter, and they must all be friends to one another. He said that "in the fall of the year (1890) the youth of all the good people would be renewed so that nobody would be more than 40 years old," and that "if they behaved themselves well after this, the youth of every one would be renewed in the spring." He said "if they were all good he would send people among them who could cure all their wounds and sickness by mere touch and that they would live forever." He told them "not to quarrel, nor fight, nor strike each other, nor shoot one another; that the whites and Indians *there* were to be all one people." He said "if any man disobeyed what he ordered his tribe would be wiped from the face of the earth; that they must believe everything he said, and must not doubt him or say he lied;" that "if they did he would know it; that he would know their thoughts and actions in no matter what part of the world they might be." Indian delegates who have seen the Messiah describe him in different ways, some as an Indian, others as a white man. There were, undoubtedly, several masquerading in the same robes and disguise as one person. They state that the Messiah is the one who taught them various religious ceremonies and to dance what has been termed the "ghost dance" or a sacred dance, clothed in a light garment like a shirt or hunter's frock, which, after being sanctified, was believed to be bullet proof.

It has been learned that delegates from the different tribes were all present when the Messiah appeared or was seen by them at different

times, and these all returned to their various reservations, announcing to their relatives and friends what they had learned, fully convinced themselves, and convincing others that what they had seen and heard was true. These talks lasted sometimes for four or five days, and the warriors were initiated in the mysteries of the new faith as taught by the so-called Messiah. The Indians received the words of prophecy from the Messiah with intense enthusiasm, thinking that after years of distress and discouragement their prayers had been heard and that they were about to enter into a life of happiness for which they believed nature had originally intended them. The fanaticism and superstition of these people were taken advantage of by their disaffected and designing leaders to encourage them to assume hostilities toward the Government and white people.

OUTBREAK PRECIPITATED.

Short Bull, one of the Indians who had made the pilgrimage to Nevada, and who had become one of the acknowledged leaders of the hostile element, in a public harangue announced that he would shorten the time for a general uprising, and called upon all the warriors to assemble in what is known as the Mauvaises Terres or Bad Lands, on the White River, southwest of South Dakota, in November, 1890. Short Bull's speech, interpreted, was as follows:

My friends and relatives: I will soon start this thing in running order. I have told you that this would come to pass in two seasons, but since the whites are interfering so much, I will advance the time from what my Father above told me to do so. The time will be shorter. Therefore you must not be afraid of anything. Some of my relations have no ears, so I will have them blown away. Now there will be a tree sprout up, and there all the members of our religion and the tribe must gather together. That will be the place where we will see our relations. But, before this time, we must dance the balance of this moon, at the end of which time the earth will shiver very hard. Whenever this thing occurs I will start the wind to blow. We are the ones who will then see our fathers, mothers, and everybody. We the tribe of Indians, are the ones who are living a sacred life. God, our Father, himself has told and commanded and shown me to do these things. Our Father in Heaven has placed a mark at each point of the four winds; first, a clay pipe, which lies at the setting of the sun and represents the Sioux tribe; second there is a holy arrow lying at the north, which represents the Cheyenne tribe; third, at the rising of the sun there lies hail, representing the Arapahoe tribe; and fourth, there lies a pipe and nice feather at the south, which represents the Crow tribe. My Father has shown me these things, therefore we must continue this dance. There may be soldiers surround you, but pay no attention to them, continue the dance. If the soldiers surround you four deep, three of you on whom I have put holy shirts will sing a song, which I have taught you, around them, when some of them will drop dead, then the rest will start to run, but their horses will sink into the earth; the riders will jump from their horses, but they will sink into the earth also; then you can do as you desire with them. Now you must know this, that all the soldiers and that race will be dead; there will be only five thousand of them left living on the earth. My friends and relations, this is straight and true. Now we must gather at Pass Creek, where the tree is sprouting. There we will go among our dead relations. You must not take any earthly things with you. Then the men must take off all their clothing, and the women must do the same. No one shall be ashamed of exposing their persons. My Father above has told us to do this, and we must do as he says. You must not be afraid of anything. The guns are the only things we are afraid of, but they belong to our Father in Heaven. He will see that they do no harm. What, ever white men may tell you, do not listen to them. My relations, this is all. I will now raise my hand up to my Father and close what he has said to you through me.

This harangue was followed by the movement of some three thousand Indians from the Rosebud and Pine Ridge reservations, to that rough, broken country of high buttes, ravines, and impassable gulches. The hostile element on the Cheyenne and Standing Rock agencies were prepared to join them. As the following of Short Bull and Kicking

Bear moved to the bad lands they looted the homes of hundreds of Indians who had been trying for years to farm and in part support themselves, and carried with them many Indians who were peaceably disposed. This would have been the case on other reservations had not protection been given to the loyally disposed and decided measures been taken to suppress the hostile element.

THREATENED HOSTILITIES.

The leaders who have been constantly and persistently hostile to every measure of civilization proclaimed there could be no better way of helping the prophesy and hastening the coming of the Messiah than by aiding in the removal of the white people, and to such disaffected, turbulent, hostile spirits as Sitting Bull, Kicking Bear, Short Bull, and others, this was the time for action. Nothing could be more gratifying to them, and the false prophets and medicine men immediately took advantage of the wretched condition of the Indians to spread disaffection among the different tribes.

The runners of Sitting Bull, who for years had been the great war chief and the head center of the hostile element, traveled in various directions, but more especially to the tribes in the Northwest, carrying his messages to get ready for war and to get all the arms and ammunition possible, and for all the warriors to meet near the Black Hills in the spring of 1891. He even sent emissaries beyond the boundary line of the United States to the Indian tribes in the British Possessions, and promises of support were returned. The first serious disturbance of any kind was to be signal for the gathering of all the warriors from the different tribes.

The Indians had, in the interim of peace, succeeded in getting together a large amount of ammunition and arms, particularly their favorite weapon, the Winchester rifle. They were, consequently, far better prepared to wage a war than at any previous time in their history. As some of the delegates to the conclave in Nevada were not imbued with the peaceful teachings of the "Messiah," but were, on the contrary, disappointed, inasmuch as they had hoped to hear him teach some incendiary doctrine, the disaffection spread by Sitting Bull and other like spirits received their hearty support, and they disseminated knowledge to the Indians not strictly conforming to the Messiah's teachings, but more to their own, and the Indians were wrought up to a frenzy of wild excitement.

The above information and much more was gained from various sources chiefly while the division commander was engaged with the Northern Cheyenne Commission, visiting the various Indian reservations during the latter part of October and the early part of November, 1890, and through the department commanders and staff officers ordered to investigate the subject. As the control of Indian affairs was in the hands of Indian agents the military could not and did not take action until the conspiracy had spread over a vast extent of country, and the most serious Indian war of our history was imminent. In fact, the peace of an area of country equal to an empire was in peril. The States of Nebraska, the two Dakotas, Montana, Wyoming, Colorado, Idaho, and Nevada, and the Territory of Utah, were liable to be overrun by a hungry, wild, mad horde of savages. The old theory that the destruction of a vast herds of buffalo had ended Indian wars, is not well-founded. The same country is now covered with domestic cattle and horses and the Indians would have, in what they believed

to be a righteous crusade, looted the scattered homes and lived and traveled upon the domestic stock of the settlers. Pillage would have been followed by rapine and devastation.

So general was the alarm of the citizens, the officials of the General Government, the governors of the States, and the press of that part of the country, that all earnestly appealed for aid and protection for the settlements.

APPEALS FOR TROOPS.

In a letter dated October 29, 1890, from P. P. Palmer, Indian agent, Cheyenne River Agency, to the Interior Department, he says of Hump and his following that the best means of preventing an outbreak among the Indians would be to take these leaders entirely out of the reach of their followers.

In a letter dated October 30, 1890, D. F. Royer, Indian agent at Pine Ridge Agency, informs the Commissioner of Indian Affairs that—

Some of the disadvantages originating from this ghost dance is the believers in it defy the law, threaten the police, take their children out of school, and if the police are sent after the children, they simply stand ready to fight before they will give them up. When an Indian violates any law the first thing they do is to join the ghost dance, and then they feel safe to defy the police, the law, and the agent.

And further—

I have carefully studied the matter for nearly six weeks and have brought all the persuasion through the chiefs to bear on the leaders that was possible, but without effect, and the only remedy for this matter is the use of military, and until this is done, you need not expect any progress from these people; on the other hand, you will be made to realize that they are tearing down more in a day than the Government can build up in a month.

In transmitting the reports of Agents Palmer and Royer, the Secretary of the Interior says:

It may be best to have a force of soldiers sufficient to arrest and watch these Indians for a time, but if it is attempted, it should be done with firmness and power so great as would overwhelm the Indians from the beginning.

Under date of November 12, 1890, the Acting Commissioner of Indian Affairs, upon receipt of additional reports from the Indian agents, says that the agent at Pine Ridge reports "that the craze has steadily increased until now it has assumed such proportions both in the number and spirit of adherents that it is entirely beyond the control of the agent and police force, who are openly defied by the dancers," and as a means of stopping the dances, the agent suggests sending a body of troops sufficient to arrest the leaders therein and imprison them and disarm the balance of the reservation. And on the 13th he transmits a telegram from Agent Royer, showing that two hundred participants in the ghost dance, all armed and ready to fight, had overpowered the Indian police, and that the agency is at the mercy of these "crazy dancers," and says:

I deem the situation at said agency arising from the ghost dance as very critical, and believe that an outbreak may occur at any time, and it does not seem to me to be safe to longer withhold troops from the agency. I therefore respectfully recommend that the matter be submitted to the honorable Secretary of War with the request that such instructions as may be necessary be given to the proper military authorities to take such prompt action as the emergency may be found by them to demand, to the end that any outbreak on the part of the Indians may be averted and the Indians be shown that the authority of this Department and its agent must be respected and obeyed by them.

Not until the civil agents had lost control of the Indians and declared themselves powerless to preserve peace, and the Indians were in armed

hostility and defiant of the civil authorities was a single soldier moved from his garrison to suppress the general revolt. To prevent the threatened murder of the civil agents and employés at the Rosebud and Pine Ridge Agencies and the destruction of the public property at those places, as well as to give protection to and encourage the loyal and peaceful Indians, troops were ordered to those points under command of General Brooke, commanding the Department of the Platte, on November 17, 1890.

CONDITION OF THE TROOPS.

A period of several years of peace and inactivity from serious field service had created a feeling of security on the part of the settlers and a degree of confidence on the part of the troops not warranted by the real condition of affairs. It was found that this period of peace had, to some extent, impaired the efficiency of the troops. This was noticeable in the want of proper equipment for field operations, especially in transportation. There was a reasonable amount of transportation for the ordinary post or garrison service, but it was entirely inadequate for field operations. The time to prepare them for active campaigning was so short that they were hardly equipped before their services were required in the field. While the danger and alarm was general throughout the settlements and thousands of unfortunate people, whose homes were scattered throughout that vast territory, were sacrificing what little property they had to obtain transportation to move their families out of the country, leaving much of their property uncared for and unprotected, the hostile element of the different tribes was gathering strength and hastening the time for a general outbreak. With as little delay as possible troops were being properly prepared for field service and concentrated where their services would be available.

It was the design of the division commander to *anticipate the movements of the hostile Indians and arrest or overpower them in detail before they had time to concentrate in one large body*, and it was deemed advisable to secure, if possible, the principal leaders and organizers, namely, Sitting Bull, and others, and remove them for a time from that country. To this end authority was given on November 25, 1890, to William F. Cody, a reliable frontiersman, who has had much experience as chief of scouts, and who knew Sitting Bull very well, and had perhaps as much influence over him as any living man, to proceed to the Standing Rock Agency to induce Sitting Bull to come in with him, making such terms as he (Cody) might deem necessary, and if unsuccessful in this, to arrest him quietly and to remove him quickly from his camp to the nearest military station. He was authorized to take a few trusty men with him for that purpose. He proceeded to Fort Yates on the Standing Rock Reservation and received from Lieut. Col. Drum, commanding, the necessary assistance, but his mission was either suspected or made known to the friends of Sitting Bull, who deceived him as to his whereabouts. This had the effect of delaying the arrest for a time.

At this time the division commander proceeded to Washington for the purpose of laying before the authorities the plans and measures to be taken to suppress the hostilities should they commence, and to supply the necessary food to keep the Indians from suffering. Authority was given to supply the necessary additional food out of the Army appropriations, as a military necessity, and the Secretary of the Interior also gave authority to issue the rations authorized by treaty of 1889. In addition, orders were given directing all the Sioux agencies to be

placed practically under the control of the military, especially so far as related to the police and management of the Indians, and the civil agents were directed to comply with the orders received from the military authorities. Complying with the terms of the treaty so far as the ration was concerned went far to retaining the loyalty of a good percentage of the Indians who might otherwise have become involved. This much having been accomplished active measures were then taken to suppress the hostile element who were upon the verge of a general outbreak.

ARREST AND DEATH OF SITTING BULL.

The first measure for the arrest of Sitting Bull having failed orders were given on December 10, 1890, directing the commanding officer, Fort Yates, to make it his personal duty to secure the arrest of Sitting Bull without delay. Accordingly the commanding officer, Fort Yates, directed that certain troops of his command under Capt. Fenchét go to Sitting Bull's camp and the remainder of the troops be held in readiness for service. Mr. McLaughlin, the Indian agent, selected a body of police (composed of Indians in whom he had confidence), who were ordered to the camp of Sitting Bull to make the arrest, to be followed and supported by the troops under Capt. Fenchét. Had Sitting Bull submitted to the arrest by the lawful authorities of the Government he would have been unharmed and probably alive to-day. Although urged to submit quietly by the men of his own race, clothed with the authority of the Government, acting as police, he resisted, and made a determined effort to avoid going with them. In fact, he raised the cry of revolt, which gathered around him a strong force of his followers, numbering something like seventy-five warriors, who opened fire upon the police, and a desperate fight ensued, in which Sitting Bull and seven of his warriors were killed and many wounded; not, however, without serious loss to the brave Indian policemen carrying out the orders of their agent and the officers of the Government. Six of their number were killed and others seriously wounded. In fact, the whole number would have been massacred had it not been for the timely arrival of Capt. Fenchét, who quickly made proper disposition of his force, and with his mounted men and one Hotchkiss gun, drove back the warriors surrounding the police and pursued them through the wooded country for several miles. The action of Capt. Fenchét was gallant, judicious, and praiseworthy, and it had the effect of striking the first and most serious blow to the hostile element, and of totally destroying it on that reservation.

Regarding the death of Sitting Bull, his tragic fate was but the ending of a tragic life. Since the days of Pontiac, Tecumseh, and Red Jacket no Indian has had the power of drawing to him so large a following of his race, and molding and wielding it against the authority of the United States, or of inspiring it with greater animosity against the white race and civilization. In his earlier years he had gained a reputation by constantly organizing and leading war and raiding parties; and, although not a hereditary chief, was the recognized head of the disaffected element when the Sioux were at war, and in his person was the exponent of the hostile element around which gathered the young, ambitious warriors of the different tribes, and his death, for which he alone was responsible, was a great relief to the country in which he had been the terror for many years.

His followers who were not killed were pursued by the troops, a portion surrendered at the Standing Rock Agency, the others with the ex-

ception of thirty went to the reservation to the south, where they were intercepted and surrendering their arms were taken to Forts Bennett and Sully, where they were kept for several months under military surveillance.

REMOVAL OF HUMP.

The next important event was the removal of Hump, who had become disaffected on the Cheyenne River Reservation, which was accomplished without violence. For seven years Capt. Ewers, Fifth U. S. Infantry, had had charge of this chief and his followers, and had gained their confidence and respect. At the request of the division commander, Capt. Ewers was ordered from Texas to South Dakota, and directed to put himself in communication with Hump. Hump was regarded as one of the most dangerous Indians in that part of the country. In fact, so formidable was he considered that the civil agents did not think it possible for Capt. Ewers to communicate with him. Capt. Ewers promptly acted upon his instructions, proceeded to Fort Bennett, and thence, with Lieut. Hale, without troops, 60 miles into the country to Hump's camp. Hump at the time was 20 miles away, and a runner was sent for him. Immediately upon hearing that Capt. Ewers was in the vicinity, he came to him, and was told that the division commander desired him to take his people away from the hostiles, and bring them to the nearest military post. He replied that "if Gen. Miles sent for him, he would do whatever was desired." He immediately brought his people into Fort Bennett, and complied with all the orders and instructions given him, and subsequently rendered valuable service for peace. Thus an element regarded as among the most dangerous was removed. All except thirty of Hump's following returned with him and Capt. Ewers to Fort Bennett. The remaining thirty broke away and joined Big Foot's band, which with the addition of twenty or thirty that had escaped from Sitting Bull's camp at Standing Rock Agency, increased his following to one hundred and sixteen warriors. Orders were then given for the arrest of this band under Big Foot, which was accomplished by the troops under Lieut. Col. Sumner on the 22d of December, 1890. Under the pretense that they (the Indians) would go to their agency at the mouth of the Cheyenne River, they, on the night of the 23d of December, eluded the troops and started south toward the Indian rendezvous in the Bad Lands, near White River, about 40 miles west of Pine Ridge Agency.

DISPOSITION OF TROOPS.

While this was being done, seven companies of the Seventh Infantry, under Col. Merriam, were placed along the Cheyenne River to restrain the Indians of that reservation and intercept those from Standing Rock, which had a very salutary effect upon the Indians of both reservations. In the mean time, a strong force had been gathered at the Rosebud and Pine Ridge Agencies. Those at the Rosebud were under the command of Lieut. Col. Poland, composed of two troops of the Ninth Cavalry and battalions of the Eighth and Twenty-first Infantry; Col. Shafter, with seven companies of the First Infantry controlled the country to the south and west of the Rosebud Agency, with station at Fort Niobrara; those at Pine Ridge Agency, under the immediate command of Gen. Brooke, were eight troops of the Seventh Cavalry, under Col. Forsyth, a battalion of the Ninth Cavalry, under Maj. Henry, a battery of the First Artillery under Capt. Capron, a company of the Eighth Infantry,

and eight companies of the Second Infantry under Col. Wheaton. West from Pine Ridge Agency was stationed a garrison of two companies under Col. Tilford of the Ninth Cavalry; north of that with headquarters at Oelrichs was stationed Lieut. Col. Sanford of the Ninth Cavalry, with three troops, one each from the First, Second and Ninth Cavalry; north of that on the line of the railroad at Buffalo Gap Capt. Wells, with two troops of the Eighth Cavalry and one troop of the Fifth Cavalry was stationed; north of that on the same railroad at Rapid City Col. Carr of the Sixth Cavalry, with six troops was in command; along the south fork of the Cheyenne River Lieut. Col. Offley, and seven companies of the Seventeenth Infantry was stationed, and to the east of the latter command, Lieut. Col. Sumner, with three troops of the Eighth Cavalry, two companies of the Third Infantry, and Lieut. Robinson's company of scouts was stationed. Small garrisons were also stationed at Forts Meade, Bennett, and Sully. Most of the force was placed in position between the large hostile camp in the Bad Lands, which had gathered under Short Bull and Kicking Bear, and the scattered settlers endangered by their presence. As the line under Col. Carr was considered the most liable to be brought in contact with the hostile force, the division commander established his temporary headquarters at Rapid City, S. Dak., where this force was in close communication, and from which their movements could be directed with the least delay.

EFFORTS FOR PEACE.

Every effort was made by Gen. Brooke in command at Pine Ridge and Rosebud to create dissension in the hostile camp and to induce as many Indians as possible to return to their proper reservations. At the same time, the troops to the west formed a strong cordon which had the effect to gradually force the Indians back to the agency; the object being, if possible, to avoid conflict, although at any time from the 17th day of December, 1890, to the 15th day of January 1891, the troops could have engaged the Indians and a serious engagement would have been fought. The effect would have been to kill a large number of the Indians, costing the lives of many officers and men, and unless complete annihilation resulted, those who escaped would have preyed upon the settlements, and the result might have been a prolonged Indian war.

The fact that the Indians had lost confidence in the Government was a serious embarrassment to the military. They claimed that their lands had been taken and were then occupied by white settlers, which is true; and that they had received no positive guaranty that the terms of the treaty they had made would be carried out.

WOUNDED KNEE CREEK AFFAIR.

Although the camp of Big Foot had escaped the troops on the Cheyenne River, the troops on the south were moved so as to prevent him joining the hostile element, and orders were given to the troops under Col. Carr and Gen. Brooke not only to intercept the movement of Big Foot and party but to cause their arrest. This was accomplished by Maj. Whitside on the 28th day of December, 1890, who met Big Foot $1\frac{1}{2}$ miles west of Porcupine Creek and demanded his surrender. The band submitted to it without resistance and moved with the troops 7 miles, where they were directed to camp, which they did in such position as the commanding officer directed. In order that no mistake

might be made, and to have sufficient troops on the ground in case of resistance, Col. Forsyth was ordered by Gen. Brooke to join Maj. Whit-side with four troops of cavalry, which, with the company of scouts under Lieut. Taylor, made up a force of eight troops of cavalry, one company of scouts, and four pieces of light artillery, a force of 470 fighting men as against 106 warriors then present in Big Foot's band. A scouting party of Big Foot's band was out looking for the hostile camp of Short Bull and Kicking Bear, but as they (Short Bull and Kicking Bear) had been started from the Bad Lands and were moving into Pine Ridge Agency they were returning to Big Foot's band when the fight occurred on the morning of the 29th of December, 1890.

It was the intention to order Big Foot's band to the railroad and then send it back to the reservation where it belonged, or out of the country for a time, in order to separate it from the other Indians. As they had not been within a long distance of the hostile camp in the Bad Lands it was deemed advisable to keep them as far away as possible from it.

The unfortunate affair at Wounded Knee Creek December 29, 1890, in which 30 officers and soldiers and 200 Indians (men, women, and children) were killed or mortally wounded, prolonged the disturbance and made a successful termination more difficult.

A number of the Indians that had remained peaceable at the Pine Ridge Agency became greatly alarmed on learning what had befallen the band of Big Foot, and some of the young warriors went to their assistance. These, on returning with the intelligence of what had occurred, caused a general alarm, which resulted in some 3,000 leaving the camps located about the agency to join the hostiles and assume a threatening attitude.

The Indians from the Bad Lands, under Short Bull and Kicking Bear, would have camped that night (December 29) within 4 miles of the agency, but on hearing the news of the Big Foot disaster turned back and assumed a hostile attitude on White Clay Creek about 17 miles from the Pine Ridge Agency. Thus, instead of the hostile camp under Short Bull and Kicking Bear camping within a short distance of the agency, the next day, the 30th of December, found the hostile camp augmented to nearly 4,000, and embracing more than a thousand warriors.

AFFAIR AT THE MISSION.

On December 30 a small band of Indians came near the Catholic Mission, 4 miles from the military camp at Pine Ridge, and set fire to one of the small buildings. Col. Forsyth, with eight troops of the Seventh Cavalry and one piece of artillery, was ordered by Gen. Brooke to go out and drive them away. He moved out, the Indians falling back before his command with some skirmishing between the two parties, until they had proceeded 6 miles from the camp at Pine Ridge. There the command halted without occupying the commanding hills, and was surrounded by the small force of Indians. Skirmishing between the two parties followed. Col. Forsyth sent back three times for reinforcements, and fortunately Maj. Henry, with four troops of the Ninth Cavalry and one Hotchkiss gun, was in the vicinity, and moved at once at the sound of the guns. Upon arriving on the ground he made proper disposition of his troops by occupying the adjacent hills and drove the Indians away without casualty, thereby rescuing the Seventh Cavalry from its perilous position. The Seventh Cavalry lost one

officer (Lieut. Mann, mortally wounded) and one private killed and several wounded.

From all information that could be obtained the Indians engaged in this affair did not number more than 60 or 70 young warriors. For his conduct on that day and the previous day Col. Forsyth was relieved from command.

RESULT AND OTHER AFFAIRS.

These two affairs, namely, at Wounded Knee and what is known as the Mission fight, seriously complicated the situation and increased the difficulty of suppressing the outbreak. On the evening of the 28th of December everything indicated a settlement without a serious loss of life. The result may be summed up in the loss of nearly 200 people, delay in bringing the Indians to terms, and caused 3,000 Indians to be thrown into a condition of hostility with a spirit of animosity, hatred, and revenge. The spirit thus engendered made it more difficult to force back, or restore the confidence of the Indians, and for a time it looked as if the difficulty would be insurmountable.

On December 30, 1890, the wagon train of the Ninth Cavalry was attacked by Indians and was repulsed by the troops guarding it. On January 3, 1891, an attack was made upon Capt. Kerr's troop of the Sixth Cavalry, then in position between Col. Carr and Lieut. Col. O'Leary, and quickly and handsomely repulsed by that officer and his troop, aided by the prompt support of Maj. Tupper's battalion, followed by Col. Carr. These repulses had a tendency to check the westward movements of the Indians and to hold them in position along White Clay Creek until their intense animosity had to some extent subsided.

Realizing the importance of restoring confidence to those who were not disposed to assume hostilities, the division commander changed positions with Gen. Brooke and directed him to assume the immediate command of the troops encircling the hostile camp, and took station at Pine Ridge, where he could not only communicate directly with the camp but exercise a general supervision over all the commands.

Having a personal knowledge extending over many years of those Indians, most of whose prominent leaders, including Broad Trail, Little Hawk, Kicking Bear, and Short Bull, had surrendered to me on the Yellowstone ten years before, I was enabled to bring them to reason and restore confidence.

Fortunately, Congress appropriated funds necessary for complying with the obligations of the Sioux treaty, and the division commander was enabled to assure the Indians that the Government would respect their rights and necessities.

Messengers were immediately sent representing to them the injudicious policy of contending against the authorities, and assuring them that there was only one safe road, and that was toward the agency, to surrender. They were also advised that the powerful commands were so distributed in the immediate vicinity of their camps and at the most important points as to intercept them should they break through the line, but if they would comply with the directions of the division commander, they would be assured of his support in order to obtain their rights and privileges under their treaties with the Government. They were also informed at the same time that unnecessary acts of violence were disapproved by the authorities; and they must decide whether the military should be their friend or their enemy.

While the troops were exercising the utmost vigilance and constant care in inclosing the large camp of Indians, leaving as far as practicable no outlet for them to escape and steadily pressing them back toward Pine Ridge Agency, every effort was made to restore their confidence and compel them to return to their agencies. Fortunately at that time a change had been made in the administration of their affairs. Their supplies of food had been increased and properly distributed, and officers in whom they had confidence, and whom they had known for years, were placed in charge. Capt. Hurst was given general supervision at the Cheyenne River Agency; Capt. Lee at Rosebud Agency; Capt. Ewers was placed in charge of the Cheyennes, and Capts. Pierce and Dougherty in charge of Pine Ridge. Subsequently, Capt. Penney was appointed as acting Indian agent at Pine Ridge.

THE SURRENDER.

Under these circumstances, with the assurance of good faith at the agencies and from the Government, and held by strong cordon of troops encircling them, they were gradually pressed back to the agency, and on the 15th of January, moved up White Clay Creek and encamped within easy range of the guns of the large command, under Col. Shafter, stationed at Pine Ridge, the troops under Gen. Brooke following immediately behind them, almost pushing them out of their camps. On the next day they moved farther in and encamped under the guns of the entire command and surrendered their entire force of nearly 4,000 people. The troops were moved into three strong camps of easy communication, occupying the three points of a triangle, with the Indian camp in the center in close proximity to the troops.

While in this position they surrendered nearly 200 rifles, and were complying with every order and instruction given them; yet the information that was frequently received at the time of the finding of the bodies of Indians (men, women, and children) scattered over the prairies, and their knowledge of the number in the hospitals, the wounded in the Indian camp, and the other casualties that had occurred to them, caused a feeling of great distress and animosity throughout the Indian camp. Yet sufficient arms had been surrendered to show their good faith. These arms, together with what had been taken at other places, viz, in the Wounded Knee affair and at the Cheyenne and Standing Rock Reservation, aggregated in all between 600 and 700 guns; more than the Sioux Indians had ever surrendered at any one time before. This was a sufficient guaranty of good faith; but in order to make it doubly sure, and as they had agreed to comply with every direction given them by the division commander, they were informed that he required the persons of Kicking Bear and Short Bull, the two leaders of the hostiles, and at least twenty other warriors of the same class. As they had agreed to comply with every order given them, these men came forward and volunteered to go as hostages for the good faith of their people and as an earnest of their disposition to maintain peace in the future. These men were placed in wagons and sent 26 miles to the railroad, and thence by rail to Fort Sheridan, Ill., where it was the purpose of the division commander to retain them until such time as it might be necessary to guarantee a permanent peace.

Knowing the Indians had well-founded grievances, he requested authority to send 10 men representing the different elements of the Sioux Nation, and chiefly the loyal and well-disposed portion, to Wash-

ington, D. C., to enable them to represent their affairs to the authorities, and to tell their own story. This party included some of the best and wisest counselors, the ablest and most loyal friends of the Government living upon the Sioux reservations.

Thus ended what at one time threatened to be a serious Indian war, and the frontier was again assured of peace and safety from Indians who a few weeks prior had been a terror to all persons living in that sparsely populated country. Too much credit cannot be given the troops, who endured the hardships and sustained the honor, character, and integrity of the service, risking their lives in their effort to restore peace and tranquillity, placing themselves between a most threatening body of savages and the unprotected settlements of the frontier in such a way as to avoid the loss of a single life of any of the settlers and establishing peace in that country with the least possible delay. In fact the time consumed in solving the most difficult problem was remarkably brief, it being but fourteen days from the time Sitting Bull was arrested to the time the Indians were moving in to surrender, and would have encamped within 4 miles of the agency had not the disaster at Wounded Knee occurred. Notwithstanding this unfortunate affair, the time occupied was only thirty-two days from the time of the arrest of Sitting Bull until the whole camp of four thousand Indians surrendered at Pine Ridge, S. Dak.

RETURN OF INDIANS TO RESERVATIONS.

The Brulés, the most turbulent of the hostile element, were taken by Capt. Lee (in whom they had great confidence and had great reason to respect on account of his thorough justice in the management of their affairs years previously) across the country to the Rosebud Agency, to which they belonged, without escort and during the most intense cold of the winter.

The Cheyenne Indians, who but a few weeks before were regarded as a most dangerous band, were taken by Capt. Ewers, in whom they had not only confidence and respect, but absolute affection, to the north, on one of the most perilous and difficult journeys ever accomplished in this country, a distance of about 300 miles from Pine Ridge, S. Dak., to the mouth of Tongue River, in Montana, traveling in the intense cold of winter in that desolate country, the ground covered in many places with several feet of snow, and this without an escort of troops. They finally reached Fort Keogh without a single loss of life or without an Indian committing a single unlawful act during that long and perilous journey.

During the time of intense excitement, when it seemed that a serious outbreak was imminent, the governors of Nebraska and South Dakota placed troops along the line of settlements, which gave confidence to the settlers and additional protection to those exposed positions.

Although the campaign was short, it was not without serious loss. Two excellent officers were killed and one mortally wounded. Capt. George D. Wallace, Seventh Cavalry, was killed at Wounded Knee Creek, December 29, 1890, and First Lieut. Edward W. Casey, Twenty-second Infantry, a gallant young officer of great promise, was killed January 7, 1891, near Pine Ridge, while making a reconnaissance. First Lieut. James D. Mann, Seventh Cavalry, was mortally wounded at White Clay Creek, December 30, 1890; First Lieut. Ernest A. Garlington and John C. Gresham, Seventh Cavalry, and John C. Kinzie,

Second Infantry, and Second Lieut. Harry L. Hawthorne, Second Artillery, were wounded at Wounded Knee Creek, December 29, 1890. Twenty-eight gallant soldiers were also killed and 38 wounded in the various skirmishes and affairs, some of whom have since died.

END OF THE CAMPAIGN.

The troops participating in the campaign were immediately returned to their proper stations; the force at Pine Ridge was gradually reduced; Capt. Pierce, the acting Indian agent at Pine Ridge, was relieved on account of sickness by Capt. Dougherty, in turn relieved at his own request and Capt. Penney appointed. The latter has administered the affairs of that agency with great ability. Additional appropriations have been given for the support of the Indians, and they now receive nearly one-half as much more than they received a year ago.

Notwithstanding the fact that the "volcano has cooled down" the fires of discord still remain. Even while the hostages were at Fort Sheridan they received communications from their friends in the Sioux camps stating that they had not given up the conspiracy of one grand uprising of the Indians, and that the Utes were ready to join the Sioux whenever they were ready to resume hostilities. Communications have been discovered going between the different camps inciting the Indians to hostility, and even now, while this communication is being written, there is a delegation from the Indian Territory absent, ostensibly to visit relatives at the Arapahoe and Shoshone reservations in Wyoming. They have, in fact, gone across the mountains, and are now in the abodes of the supporters of the Messiah delusion near Pyramid Lake, in Nevada.

During the months following the serious disturbance of the peace the confidence of all has been restored. Many of the settlers have gone back to their abandoned homes and ranches, and the Indians have resumed their accustomed occupations.

Advantage was taken of the return of troops to locate them in regimental posts, giving regiments to Fort Snelling, Minn.; Fort Keogh, Mont.; Fort Assiniboine, Mont.; Fort Douglas, Utah; Fort Omaha, Nebr.; Fort D. A. Russell, Wyo.; and Fort Sheridan, Ill.; and very strong garrisons of troops at Forts Meade, Niobrara, and Robinson.

Nothing of importance has occurred since the undersigned assumed command of the Department of the Missouri which requires special mention in this report. The affairs of the Indian Territory are gradually adjusting themselves after being in a state of transition for a long time. The days of large holdings of land by the Indians in common will eventually cease and the Indians take up lands in severalty.

WORLD'S COLUMBIAN EXPOSITION.

As we approach nearer the time of the World's Columbian Exposition, the most important affair of the kind that has ever been held in the world, it would seem advisable to take advantage of the occasion to mobilize or assemble what is known as the national guard or State militia. The Constitution has very judiciously and wisely reserved the control of these forces to the various State governments, but as a means to promote the efficiency of the various organizations, it would be well to assemble them under Congressional enactment, with the approval and authority of the various State governments, in one national encampment at least once in a generation.

As there has been no gathering of that magnitude since the armies were dispersed in 1865, I would respectfully recommend that the militia be brought together at this peace jubilee. Most of the members of the national guard, who are engaged in the great industries of the country, will desire to be present at the exposition at some time during its session, and many of them would prefer to come with their organizations, in order to combine with the encampment the benefits of the exposition. It would also be beneficial to the State organizations to be brought together in one national encampment, where they would have the advantage of meeting troops from other States. For instance, those of New England would be placed alongside of those from the Gulf, and those from the Atlantic and interior meet those from the Pacific slope, making one grand encampment of the citizen soldiery of this country, where patriotism and the spirit of emulation would prompt each organization to attain the highest degree of excellence. Such inspections, parades, and field maneuvers as might be beneficial could be executed.

As the General Government makes yearly appropriations for the equipment of the militia I see no reason why it should not provide transportation for assembling it in the encampment above proposed. The reasonable reduction of rates usual in other countries for such movements of troops, and frequently given in this country, would reduce the aggregate cost, say, for ninety thousand State troops and ten thousand Federal troops to \$850,000, approximately. For that purpose I would respectfully recommend that Congress be asked to make the necessary appropriation to provide transportation for the troops from their various State capitals to the national encampment at or near the World's Columbian Exposition, Chicago, Ill., and return, and provide authority for the movement of such State organizations, the same to be designated and directed by the governors of the various States interested.

I would also renew the recommendations contained in my annual report of 1889, mentioned on pages 8, 9, and 10, under the heads of "Recommendations" and "Promotion of subordinate officers."

Accompanying this report are three maps* and the reports* of the staff officers at these headquarters.

I have the honor to remain, very respectfully, your obedient servant,
NELSON A. MILES,
Major-General, Commanding.

The ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

REPORT OF BRIG. GEN. STANLEY.

HEADQUARTERS DEPARTMENT OF TEXAS,
San Antonio, Tex., September 9, 1891.

SIR: Since my last annual report the unity of organization of the regiments serving in this department has been reduced by virtue of General Orders Nos. 76 and 79, series 1890, Headquarters of the Army Adjutant-General's Office, from ten companies in each regiment of infantry to eight companies, and in cavalry from twelve troops to ten. The numerical force serving in the department has been further reduced.

* Omitted.

by General Orders No. 43, current series, Headquarters of the Army, Adjutant-General's Office, sending the headquarters, field, staff, and band, and six companies of the Fifth Infantry to the Department of the East. This movement made it necessary to replace the entire garrison at Fort Bliss by two companies of the Twenty-third Infantry from Fort Davis, and the two companies of the Fifth Infantry at Fort McIntosh were also replaced by two companies of the Twenty-third Infantry from Fort Davis.

It has been deemed advisable to keep the troops of this department in as large bodies as possible, for the sake of discipline and drill, and accordingly the post of Fort Sam Houston at San Antonio has a garrison of four troops of cavalry, one light battery of artillery, and five companies of infantry. Fort Clark has the Eighteenth Infantry intact. This leaves the post on the frontier as follows: Fort Bliss, two companies of the Twenty-third Infantry; Fort Hancock, one troop of cavalry; at Presidio del Norte, two detachments, one near the presidio, fifteen rank and file taken alternately from Fort Hancock and Camp Pena Colorado, and changed every three months; the other detachment at Polvo, 25 miles below Presidio, consisting of the detachment of Seminole negro-Indian scouts. These two detachments live in tents and are under the command of one officer, and are the only conservators of the authority of the United States in a territory as large as the State of Massachusetts, and guard a river boundary of more than 500 miles. Camp Pena Colorado is a cantonment, on a leased site, occupied by one troop of cavalry, which is kept in active employment looking over the large uninhabited country between the Southern Pacific Railroad and the Rio Grande, 150 miles distant. This camp is 3 miles from Marathon, a station on the Southern Pacific Railroad, and now that Fort Davis is abandoned is the only military station on the railroad between San Antonio and Fort Hancock. In view of the long distance this railroad traverses, a thinly settled country near the Mexican border, carrying United States mails and treasure, it is deemed important to keep up this cantonment. The small stations of Langtry and Del Rio, formerly occupied by detachments, have been discontinued. At the Camp at Eagle Pass, which is the old post of Fort Duncan, one troop of cavalry is stationed. At Fort McIntosh, Laredo, are headquarters Third Cavalry, one troop of the same regiment and two companies of infantry; Fort Ringgold, Rio Grande City, one troop of cavalry and one company of infantry; Fort Brown, at Brownsville, by one troop of cavalry. The small post of Fort Hancock and the post of Fort Bliss complete the border garrisons. They are all small, I think too small. Fort Brown should have three companies, Fort Ringgold the same, camp at Eagle Pass two companies, Camp Pena Colorado two troops of cavalry.

The care of the Mexican border, which in this department is defined by the Rio Grande, is one that requires constant attention. To know just how far this is the duty of the United States, or where exactly the State of Texas comes in, is not always very plain. The only safe rule is to regard all or any person coming from the right bank of the Rio Grande as an intruder; with arms in his hand, and no visible means of support, as an intruder. There is no complaint to be entertained of the Mexican Government. Their officers do their duty, but the frontier is 1,000 miles in extent, with long stretches of unsettled wild country, and no police, civil or military, can effectually watch such a border and entirely prevent crime—requiring notice by the United States forces. We find that the very presence of troops serves as a

restraining influence. Murders have occurred, and the murderer runs quickly into the wilds of Mexico, and it is plain but for the presence of United States troops, few as they are, revenue regulations would be a dead letter.

As expressed in my former reports, I recommend that the posts upon the Rio Grande, including Fort Brown and camp at Eagle Pass, be kept up to an efficient standard, not less than one company of infantry and one troop of cavalry at each of the posts, and in case of regimental headquarters being established at the post that the force be headquarters, band, and three companies.

The large posts in this department are in good condition. Fort Sam Houston is so nearly finished as to accommodate headquarters, band, and four companies of the Twenty-third Infantry, and one company Fifth Infantry, four troops of the Third Cavalry, and Light Battery F, Third Artillery, fairly well. A guardhouse and four sets of officers' quarters will complete the post. Estimates have been submitted for these buildings. At Fort Clark the entire Eighteenth Infantry is stationed, and it has been satisfactory to have an entire regiment at the same post, a thing rare in our service. The high state of discipline and drill in this regiment and the harmony of their service is a good example of the benefits of large posts.

The condition of the troops in this department is good and efficient, a matter worth mention, as during the long summers of southwestern Texas it requires extra energy to keep troops up to the mark.

* * * * *

The small number of officers present with their regiments in this department is a serious drawback to efficiency and requires attention. Of the entire commissioned force doing duty in the department the roster at a recent date showed: Present, 87; absent, 66, *i. e.*, on detached service, 31; on ordinary leave, 19; on sick leave, 10; not yet joined, 6.

Very respectfully, your obedient servant,

D. S. STANLEY,
Brigadier-General, Commanding.

The ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

REPORT OF BRIG. GEN. RUGER.

HEADQUARTERS DEPARTMENT OF CALIFORNIA,
San Francisco, Cal., September 8, 1891.

SIR: I have the honor to submit the following report of operations in this department during the past year:

Nothing strictly relating to military operations within the department limits, and of such importance as to require report of details, has occurred. In compliance with instructions of December 3, 1890, from the Headquarters of the Army, the First Infantry, Col. William R. Shafter commanding, with the exception of Company F, at Fort Gaston, and a detachment at Fort Bidwell, Cal., left the posts of Angel Island and Benicia Barracks on December 4 last, for the Division of the Missouri, for duty in the field relative to the Sioux Indian trouble then in

progress. Events did not afford opportunity for the regiment to take part in actual conflict, but the general good state of the regiment and assurance of effective performance had occasion offered, are shown by the promptness of its movements and the fact, notwithstanding the severity of the change from stations in a mild climate to the rigors of winter field service in Dakota, that not a desertion occurred during the period of absence of the regiment in December, January, and February last. The regiment returned to this department on March 4 last. For an account of the services of the regiment more in detail, and mention of specially meritorious conduct of individuals, attention is requested to the report of Col. Shafter, which is transmitted herewith.

The enlistment of a company of Indian soldiers in this department for the First Infantry has so far not been effected, nor, owing to the special conditions, has progress been made thereto. A special report will be submitted as to this subject.

Our unprepared condition as to seacoast defenses is so well known and for a long time has been, and reported upon comprehensively, particularly in the reports of the Chiefs of Engineers embraced in reports by the Secretary of War to Congress, that I allude to the matter only with purpose, upon coming into command of a department in reference to which the state of the seacoast defenses is of first importance, to add my opinion to that of others that we have not done by effective legislation sufficient to meet necessities, especially with respect to armaments, and in this connection attention is requested to that part in particular of the accompanying report by Major John I. Rogers, First Artillery, inspector of artillery, relating to progress made to this time, and as probable in future from means as now provided for.

I am sir, very respectfully, your obedient servant,

THOS. H. RUGER,
Brigadier-General, Commanding.

The ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

REPORT OF BRIG. GEN. MERRITT.

HEADQUARTERS, DEPARTMENT OF DAKOTA,
St. Paul, Minn., September 1, 1891.

SIR: I have the honor to submit the following report of military affairs in the Department of Dakota from August 1, 1890, to July 31, 1891, inclusive:

I assumed command of the Department of Dakota by virtue of General Orders No. 57, current series, Adjutant-General's Office, on July 16, 1891.

The strength of the several garrisons on July 31, 1891, was as follows:

Posts.	Officers.	Enlisted men.	Indian scouts.	Total.
Fort Abraham Lincoln, N. Dak.		3		3
Fort Assiniboine, Mont.	38	427		465
Fort Bennett, S. Dak.	3	79	2	84
Fort Buford, N. Dak.	11	150	2	163
Fort Custer, Mont.	32	393	6	431
Fort Keogh, Mont.	36	440	1	477
Fort Meade, S. Dak.	31	412		443
Fort Missoula, Mont.	19	189		208
Fort Pennington, N. Dak.	1	5		6
Fort Shaw, Mont.	2	7		9
Fort Snelling, Minn.	35	418		453
Fort Sully, S. Dak.	15	128		143
Fort Yates, N. Dak.	16	217	4	237
Fort Yellowstone, Wyo.	2	62		65
Camp Poplar River, Mont.	10	124	2	136
Total	252	3,054	17	3,323

There are 25 enlisted Indian scouts allotted to the Department.

In this connection, I should not omit to mention the matter of the 370 Northern Cheyenne Indians at the Tongue River Agency, now and for some time past in immediate charge of Capt. Ewers, Fifth Infantry. This is said to be a most deserving band of Indians. They have rendered important services to the Government, and have received, so it is said, very little recognition or generous treatment. I have already strongly seconded the request of these Indians and the recommendations of Capt. Ewers and other well-informed officers that these Northern Cheyennes be permitted to remain where they now are. I hope this petition of these Indians can be granted.

Special attention is called to the reports of staff officers on duty at these headquarters. They will be found to contain many details of interest, and recommendations which should receive attention.

It is especially noted that while the troops in the department are in a good state of discipline and fit for any service, the recent reduction in means of transportation leaves each post deficient so far as preparation for active field service is concerned. This fact should not escape attention, for in case of an Indian war the troops on this account are not prepared for efficient service in the field.

Very respectfully, your obedient servant,

W. MERRITT,

Brigadier-General U. S. Army, Commanding Department.

The ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

REPORT OF BRIG. GEN. BROOKE.

HEADQUARTERS DEPARTMENT OF THE PLATTE,
Omaha, Nebr., September 5, 1891.

SIR: Since the date of my last annual report the limits of the department have been extended by the addition of that part of the State of South Dakota lying south of the forty-fourth parallel, and later by the addition of the State of Colorado, adding Fort Randall,

S. Dak., and Forts Logan and Lewis in Colorado to the military strength.

In November the disaffection among the Sioux Indians became so great that it was deemed advisable by the President to use troops in restoring order. This matter was made the subject of a special report at the close of the operations. Since the withdrawal of troops from the Rosebud and Pine Ridge Agencies there has been no evidence of any further disaffection amongst the Indians.

In accordance with General Orders No. 28, current series, Adjutant-General's Office, a troop of cavalry (L, Sixth Cavalry) was enlisted (Brule Sioux) at Rosebud Agency; a company of infantry (I, Eighth Infantry) at Fort Washakie from the Shoshone and Arapahoes. An effort was made to enlist a company for the Second Infantry at the Pine Ridge Agency, which was not successful, but five Indians having been enlisted. The principal objection to the enlistment of Indians at this point came from the chiefs and the fact that they were satisfied with the present condition and having also an objection to serving as foot soldiers.

An effort was also made to recruit a company of Indians from the Uncompahgre and Uintah Utes, which was a failure from the causes which have been reported. An effort is now being made at the Fort Hall and Lemhi reservations, which, from the reports received from the officer in charge, will not be successful at this time. Other efforts to enlist Indians have been suspended for the present.

Very respectfully, your obedient servant,

JOHN R. BROOKE,
Brigadier-General, Commanding.

The ADJUTANT GENERAL U. S. A.,
Washington, D. C.

REPORT OF BRIGADIER-GENERAL A. McD. McCOOK.

HEADQUARTERS DEPARTMENT OF ARIZONA,
Los Angeles, Cal., September 1, 1891.

SIR: I have the honor to submit for the information of the Major General Commanding the Army, the annual report of the Military Department of Arizona from September 16, 1890, the date of my assuming command.

The Department of Arizona consists of the Territories of Arizona and New Mexico, with that portion of the State of California south of the thirty-fifth parallel. The total area in square miles is 275,010; area of Indian reservations in square miles, 26,303; number of Indians upon reservations, 39,577; population of Arizona, New Mexico, and California, south of the thirty-fifth parallel, 417,017.

There were formerly eighteen military posts in this department. This number has been reduced during the past year by the abandonment of Forts Mojave, McDowell, Verde, Thomas, Selden, Lowell, Marcy, and Union; of the buildings and military reservations upon which these posts were placed, some have been, and the remainder are

now ready to be turned over to the Interior Department, being no longer needed for military purposes. It is recommended that the Interior Department be requested to receive the buildings and lands belonging to these abandoned posts, in order that the Army be relieved from the expense and care of them.

There remain still ten military posts in this department occupied by troops; one of these is the post of San Diego. There are no officers' quarters at this post, only barracks for the enlisted men of one company of infantry. The barracks are situated upon a square of land near the docks of the harbor; the stable, corral, etc., upon another square of the city, a short distance removed from the former. The harbor of San Diego is one of the best in the world, carrying 27 feet at high water upon the bar, which rarely breaks, so that vessels can enter with safety day or night, and once inside there is surface and depth of water sufficient to float the navies of the world. This harbor lying, as it does, almost upon the southernmost point of California, is a very important one, and this body of land-locked water, whether or not to become a large port for the world's commerce, should at once be given such protection as to prevent it falling into the hands of the enemy. It is to be hoped that the Nicaragua canal will be finished in the time promised, and should this great work be completed, the harbor of San Diego will then develop into great importance, being the nearest harbor of supply and refuge to the northward of the canal's mouth on the Pacific Ocean, the next harbor being San Francisco, 520 miles north. The other ports upon the California coast are roadsteads; the extreme high water at San Pedro, the port of Los Angeles, is 14 feet. All these deficiencies will make the harbor of San Diego grow in importance every year.

The growth and progress of Southern California has been phenomenal; it is still forging ahead in population and horticulture, and agriculture, so that in a few years the railways, already heavily taxed, will be unable to carry to market the fruit and vegetable products raised. Should the Nicaragua canal be completed, deflecting, as it will, the routes of commerce, San Diego will be the great port of shipment of these products in refrigerating vessels passing through the canal to the markets of the world, hence it may be seen that soon the port of San Diego must grow to great commercial importance.

The defenseless condition of this magnificent harbor has been, and is now, a disgrace to our country. We need no better illustration of this fact than to refer to the conduct of the steamship *Itata*, a vessel engaged in making war upon a sister republic with whom we were at peace. This vessel came into the harbor of San Diego, was allowed to coal, was provisioned, and later was seized by the United States marshal, and a deputy placed on board to represent the authority of our Government in this seizure. This vessel in broad daylight raised her anchors, sailed out of the harbor, carrying the helpless Government agent along. Finally, just before passing the bar, he was put over the sides of the ship, lowered into a small boat, and told to go about his business, as the vessel was going outside. She did go out, and in our waters received arms and munitions of war.

The history of the chase of the *Charleston* for the *Itata* and her return from Chile to the harbor from which she escaped has often been told. The conduct of this vessel in San Diego Harbor placed an indignity upon every citizen of the United States, and Congress has wisely passed a resolution authorizing and directing the Secretary of War to convene a board of officers of the Army to meet at San Diego to select a site for

a military post at or near that port, also for the placement of batteries for the protection of the harbor. This board convened. It has faithfully performed its duty, selecting sites for batteries, also a tract of land fronting San Diego Harbor for the location of a military post. This land and its surroundings are all that could be asked for military purposes, including an excellent target range. The report of the board has been forwarded to the honorable Secretary of War, the requirements of the resolution of Congress being so far complied with. I earnestly recommend that a military post of sufficient size be established upon the site selected by the board to accommodate one regiment of infantry, one battalion of four troops of cavalry, and one light battery of artillery.

The necessity for this military post is obvious to all who are familiar with that country. Located upon this important harbor, about 12 miles from the Mexican frontier of Lower California, troops will be in proximity to prevent in future any violations of the neutrality laws upon the land or in the harbor.

It is recommended that the batteries for the defense of the harbor be placed, one on Point Loma, one on Ballast Point, one on southwest corner of North Island, and one on Sand Spit, southeast corner of Coronada Hotel, at a point known as the Brick Yard.

These numerous batteries become necessary on account of the peculiar situation of the city of San Diego. On account of the trend of harbor, the docks, wharves, etc., of the city are within 2 miles of the ocean, necessitating the keeping of hostile vessels at sea beyond shell- ing distance.

The climate of San Diego is so equable there is scarcely a day in the year that practical military instruction can not be carried on. By many it is considered the most agreeable and healthful climate, a sanitarium for throat and lung diseases.

FORT HUACHUCA, ARIZ.

This post is located in a canyon of the same name about 14 miles north of the Mexican line, a convenient point for observing and scouting the frontier. It is 9 miles from a station on the Sonora and Guaymas Railroad. There are comfortable quarters here for four troops of cavalry. It is now garrisoned by two troops of the Second Cavalry, and two companies of the Ninth Infantry. This is an important post, should be kept in good repair, and as soon as practicable should have additional quarters built, with an increase of troops.

FORT BOWIE, ARIZ.,

Is a two-company post, located 14 miles south of Bowie Station, on the Southern Pacific Railroad. This post is in the northwest spurs of the Chiricahua Mountains, and is well situated for the work required of it. Isolated but healthful, it is nearly north of the San Bernardino ranch on the Mexican boundary. The mountains about Bowie make it an important heliograph station for the surrounding country. The quarters for officers and enlisted men are set upon the sides of the hills, leaving the small parade ground a severe slope. The drill ground is a mile and a half from the post. Bowie is an important point for observation.

FORT GRANT, ARIZ.

This post is situated at the head of Sulphur Spring Valley and at the foot of Mount Graham. It is garrisoned by the headquarters and three troops of the Tenth Cavalry and two companies of the Twenty-fourth Infantry. Fort Grant will continue to be an important post as long as the San Carlos and White Mountain Indians are held upon their present reservations. The quarters for the enlisted men at this station are of inferior construction, contracted, and uncomfortable. The stables for the cavalry are in bad condition, needing much repair for the proper protection and comfort of the animals occupying them.

Fort Thomas has been abandoned, but is held as an outpost from Fort Grant, and will continue to be so held until the necessity ceases.

SAN CARLOS, ARIZ.,

Is situated on the north bank of the Gila River, at the Apache Indian Agency. It is 77 miles from Fort Grant via Fort Thomas. This is an important post, being at and near the homes of the Apache Indians, and will continue a military station as long as the present system of management of the Indians there is continued. Heretofore the troops have been in camp, but temporary shelter is now being made for the officers and men. San Carlos is the most uncomfortable station in the department, on account of the intense heat of summer and dust storms in the spring and autumn. The usual tour of duty at this post is six months, excepting Company G, Twenty-fourth Infantry, commanded by Capt. Lewis Johnson, who also commands the post.

FORT APACHE, ARIZ.

This post is situated in a picturesque country 97 miles south of Holbrook, a station on the Atlantic and Pacific Railroad, on White Mountain Creek. The post is also in the northern part of the San Carlos Reservation. This portion of the country is the home of the Coyotero or White Mountain Apache.

The garrison consists of four troops of the Tenth Cavalry. This post suffers under great disadvantages on account of its inaccessibility from the railroad at Holbrook during five or six months of the year. During the winter the road is almost impassable for wagons.

There is no grass in this country to make hay sufficient for the use of the public animals. Heretofore a coarse pine grass has been cut and delivered by the Indians. It is not hay; the horses and mules will not eat it. When dry, it is hard and rough and without a particle of nutriment. The consensus of opinion of all the officers is that it is not fit for food, injuring the horses who try to eat it.

In order to reduce the number of animals at that post, the garrison should be changed; two troops of cavalry going from there to Fort Grant and two companies of infantry from Grant to Apache.

WHIPPLE BARRACKS, ARIZ.

This post, formerly the headquarters of the department, adjoins the city limits of Prescott, Ariz. It is garrisoned by the headquarters, band, and five companies of the Ninth Infantry. The quarters for enlisted men are in a wretched condition and are too limited in capacity for the garrison. *They are old and worn; some of the buildings now*

occupied by the troops were not built for quarters, having none of the necessary conveniences about them. Should the contemplated railroad from Ash Fork, on the Atlantic and Pacific Railroad, via Prescott to Phoenix, Ariz., be built, Whipple Barracks would be a good point to hold troops. They could then be made available, by rail, for all parts of the Territory.

FORT BAYARD, N. MEX.

This post is situated at the southern base of the Black Range Mountains, 55 miles northwest from Deming, on the Southern Pacific Railroad. The post is 9 miles from the nearest railroad station at Silver City.

There are at this post the headquarters, band, and four companies of the Twenty-fourth Infantry, and two troops of the Tenth Cavalry. The post is well located for the work it is intended to perform, guarding the western and southern portions of New Mexico.

FORT STANTON, N. MEX.

This post was established in 1854 in a picturesque country, upon the banks of the Bonito Creek, 100 miles east of Carthage, a station upon the Atchison, Topeka and Santa Fé Railroad; it is in the valley between the Sierra Blancas and Capitan Mountains. This port will be a necessity until the Mescalero Apaches become more adapted to ways of civilization. It is garrisoned by the headquarters, band, and one company of the Tenth Infantry and one troop of the Second Cavalry.

FORT WINGATE, N. MEX.

This post is at Bear Spring, 3 miles from a station on the Atlantic and Pacific Railroad, near the southeast corner of the Navajo Reservation and a short distance north of Zuni Reservation. The garrison consists of headquarters, band, three troops of the Second Cavalry, and three companies of the Tenth Infantry. This will always be an important post on account of its vicinage with the Navajo Reservation. The Navajoes would prove a formidable enemy as to numbers and arms in case of war, but are vulnerable on account of their possessing such numerous herds of sheep, upon which they mostly subsist. These herds are so large and great in numbers they can not hide them away. For sustenance they must scatter over great areas of country. The same conditions obtain for their large herds of horses.

On account of the importance of this locality, Fort Wingate should be enlarged by additional buildings and the old quarters and store-houses rebuilt.

The Navajo Indians have been and are now peaceful and industrious in agriculture wherever a locality can be found with water or sufficient moisture in the soil to warrant attempts at this industry.

From the date of our first knowledge of these Indians they have been celebrated for the style and extraordinary good quality of their weaving, their patterns often exceeding in beauty any known to our civilization. These Indians, with their herds of sheep and horses, are self-supporting. They number nearly 18,000. Four thousand dollars has been allotted to this people for the present fiscal year.

The Navajoes are anxious to have schools established at points within their reservation, but seriously object to having their children taken to distant places beyond the reach of the parents who may desire to visit them during the school term.

The Moqui Indians are Pueblos or remnant of the Aztec Indians. They are a peculiar people living in six villages located upon table rocks averaging 600 feet above the plain.

These Indians have been heretofore friendly to the whites, with the exception of the most distant village of the Areibes. The people of this pueblo resisted the census enumerators, and did not desire to have anything to do with the white men, calling them dogs and coyotes. The people of this pueblo refused to furnish their quota of children for the school established by the Commissioner of Indian Affairs at Kean Cañon, Arizona. Lolami, the governor of the village, with a few followers, favored the school, but the medicine man and the majority of the people resisted, became obdurate, arrested the governor and imprisoned him in an estufa.

The officers of the department staff have performed their duties to my complete satisfaction. Inclosed will be found copies of their reports,* which have been prepared with care, and which give a complete history of the transactions in their respective spheres of duty.

My personal aides-de-camp have performed the duties assigned them with industry and intelligence.

Very respectfully, your obedient servant,

A. McD. McCook,
Brigadier-General, Commanding.

The ADJUTANT-GENERAL, U. S. A.,
Washington D. C.

REPORT OF BRIGADIER-GENERAL AUGUST V. KAUTZ.

HEADQUARTERS DEPARTMENT OF THE COLUMBIA,
Vancouver Barracks, Wash., September 10, 1891.

SIR: I have the honor to submit herewith the usual annual report required of the department commander. But recently assigned to the command of this department, my service in that capacity dates from the 26th of July, on which date I assumed the command. My knowledge of the operations in this command during the past year is therefore mainly confined to what may be obtained from the accompanying reports* of the chiefs of the several branches of these headquarters.

From these reports it does not appear that anything has occurred within the limits of the department that calls for special comment which has not already received the full amount of attention the case demands, except the repeated troubles between Indians and white settlers in the Kootenay River country. The Indians in that section seem to be unprovided with an agent, and have no one to look to for aid or counsel. In the near future a great increase in the number of settlers in that section will precede the building of the Great Northern Railroad, and trouble will follow unless some provision is made in anticipation. Attention is invited to the accompanying report of Lieut. Hardeman, Fourth Cavalry,* who recently visited that section in compliance with instructions issued by the commanding officer of Fort Sherman, Idaho.

The most important event of the past year was the riotous conduct of the troops of the Fourth Cavalry, stationed at Fort Walla Walla, in

* Omitted.

April last. On the night of the 23d of April a citizen of Walla Walla, Wash., named Hunt, apparently without sufficient cause, shot a soldier of the Fourth Cavalry named Miller, from the effects of which he died within forty-eight hours. Hunt was arrested and in the hands of the sheriff of the county, and there was no reason to suppose that proper and sufficient justice would not be meted out to him. On the night of the 25th of April Hunt was forcibly taken from the sheriff and the jail and shot to death with pistols and carbines, in front of the court-house, by a mob of soldiers. This is believed to be an unparalleled event in our military service, for which there can be no palliation, for the reason that civil law had taken all the necessary steps for the punishment of Hunt's offense.

Lynching, so called, is not infrequent in civil communities where public sentiment rebels against the failure of the law, especially where the forms of law have not been fully organized, or, on the other hand, in older communities where the forms of law have been prevented, but that soldiers, who in times of peace are provided as the last resort for the prosecution of law and order, that they should divert their means and their discipline to the perpetration of an act so manifestly unlawful, has never been seen in our military service.

While the event is so remarkable, yet above any responsibility that attaches to the military or civil officers connected with the case, the moral obliquity of the enlisted men concerned is the most deplorable feature. That no noncommissioned officer or enlisted man can be found to tell what he knows of the crime, and that all should disclaim any knowledge of it or the perpetrators or participants, is a more serious matter to the military service than the act itself, which they disclaim individually, but can not deny as a body. Some means should be found to sufficiently redeem the whole affair, to prevent its recurrence. The civil authorities have failed to find any one to punish, and only two soldiers have been convicted of military offenses that indicate complicity with the lynching. It will be unfortunate for the Army if nothing further can be done to condemn such a crime and at the same time such an injury to the military service.

The extraordinary growth and development of the State of Washington and the States adjoining, in the three or four years just past, suggests the necessity of many changes in administrative and defensive measures for this northwest section. I will only urge the earliest attention to the well-known measures that have been set forth by my predecessors and recommended by them.

The probable speedy disappearance of danger from Indian wars gives importance to the consideration of other lines of duty for the Army to justify its maintenance.

I am, sir, very respectfully, your obedient servant,

AUGUST V. KAUTZ,
Brigadier-General Commanding.

The ADJUTANT-GENERAL OF THE ARMY,
Washington, D. C.

REPORT OF COL. E. F. TOWNSEND.

UNITED STATES INFANTRY AND CAVALRY SCHOOL,
Fort Leavenworth, Kans., July 1, 1891.

A few months after my arrival, in examining into the methods of the school and conversing with instructors and students, I became convinced that the cause of most of the failures to graduate at this school was due to deficient knowledge in mathematics before coming here; that is, in algebra, geometry, and trigonometry, the applications of which subjects are required at once in this department. In order to obviate this difficulty in the future as much as possible, as soon as I received last winter the list of the student class for the term 1891-'93 I caused the secretary of the school to write to all the officers named therein who had been appointed from civil life or promoted from the Army, inquiring as to their knowledge of those subjects, stating the difficulties of the course, and asking if they desired six months' preliminary instruction therein.

Very respectfully, your obedient servant,

E. F. TOWNSEND,
Colonel Twelfth Infantry, Commandant.

The ADJUTANT-GENERAL, U. S. A.,
Washington, D. C.

REPORT OF THE SUPERINTENDENT OF THE U. S. MILITARY ACADEMY.

HEADQUARTERS U. S. MILITARY ACADEMY,
West Point, N. Y., September 1, 1891.

GENERAL: As Superintendent of the U. S. Military Academy I have the honor to submit the following report for the year ending August 31, 1891:

The number of officers and instructors stationed at this post on September 1, 1891, was as follows: Eight professors, 55 commissioned officers, including 1 surgeon and 1 assistant surgeon, 1 acting assistant surgeon, 1 swordmaster, and 1 teacher of music.

THE CORPS OF CADETS.

Up to June, 1891, under the terms of section 1315, Revised Statutes, the maximum number of cadets authorized was 347.

As a general rule the number of cadets at the Academy seldom exceeds 300, and on May 31, 1891, it was only 278; 17 of whom were pronounced deficient at the June examination and were discharged.

It will therefore be observed that on June 1, 1891, the corps lacked 20 per cent. of the number authorized by law.

On September 1, 1891, with the new fourth class, consisting of 103 cadets, the corps numbered 287, or about 17 per cent. less than the maximum authorized under the apportionment based upon the census of 1880.

These losses are due to resignations and to discharges based upon failures at examinations.

Under the new apportionment, based upon the last census, the maximum number of cadets authorized will be 371.

I am of the opinion that a further moderate increase of the corps will be advantageous, believing that our plant is amply sufficient to turn out a larger number of graduates each year.

Such increase should be gradual, and I would suggest at first simply restoring to the President of the United States the privilege of appointing 10 cadets each year, of which privilege he was deprived by the terms of the act of June 11, 1878.

Should this be done, the maximum number of cadets authorized would be 401, and estimating the same percentage of vacancies as now exist, the Academy would probably be able to send out to the country from 70 to 80 graduates every year.

With 401 cadets on duty, all that would be required would be the detail of a few more officers as instructors and the erection of additional quarters for their accommodation.

On September 1, 1890, there were 289 cadets connected with the Military Academy. Since that date the loss has been 9 by resignation, 25 by discharge, and 65 by graduation. The gain has been 97 admitted as new cadets, making a present total of 287 belonging to the corps, one of whom was admitted September 1, 1891. This number includes one cadet from Switzerland, and one from Central America, who are receiving instruction at the Academy by authority of joint resolutions of Congress.

In my last annual report I expressed the opinion that the medical examination of candidates should be completed before they reported at West Point.

After a close and careful study of the institution for two years, I feel assured that both the mental and physical examinations can be conducted without difficulty before the arrival of the young gentlemen at the Academy.

Very respectfully, your obedient servant,

JOHN M. WILSON,

Colonel of Engineers, Superintendent U. S. Military Academy.

The ADJUTANT-GENERAL, U. S. ARMY,
Washington, D. C.

REPORT OF THE ADJUTANT-GENERAL.

WAR DEPARTMENT,
ADJUTANT-GENERAL'S OFFICE,
Washington, October 1, 1891.

SIR: I have the honor to submit my annual report for the year ended September 1, 1891.

MILITARY COLLEGES.

The data in the table submitted herewith, compiled from the reports of the officers detailed as professors of military science and tactics at the several institutions named, afford gratifying evidence of increased

good results of a system that, by adopting military training so as to develop in the pupils a manly bearing and deportment and habits of ready obedience, confers practical benefits to both the youths under instruction and the State.

The average number of students over 15 years of age attending the several universities and colleges named was 15,717, or 4,000 more than reported in the previous year. Of this number 12,301 constitute the whole number of male students capable of military duty, while 7,487 represent the number required by the several institutions to be enrolled as military students. The total number that received military instruction during the last quarter of the scholastic year was 7,366, an increase of over 1,300 as compared with the number reported for the scholastic year 1889-90.

THE RETIRED LIST.

The act of Congress of February 16, 1891, requiring the transfers of officers on the retired list from the limited to the unlimited list upon attaining the age of 64 years, and fixing the number of the limited list as 350 instead of 400, as theretofore, has accomplished all that was anticipated, and will prove a great and lasting benefit to the Army. All incapacitated officers have been retired excepting seven, whose cases are now pending, and for whom vacancies exist to which they can be transferred if it is found expedient to order their retirement.

At the date of the passage of the law the limited list was composed of 392 officers. Of these, 105 have passed to the unlimited list, and 9 have been dropped by reason of casualties, thus reducing the limited list to 278, or 72 below the authorized limit. To these vacancies 62 incapacitated officers have been transferred from the awaiting retirement list, leaving at the present date 10 vacancies.

Transfers from the limited to the unlimited list on account of attaining 64 years of age will take place as follows during each year, to include 1896:

1891.....	1	1894.....	14
1892.....	13	1895.....	13
1893.....	10	1896.....	10

It is believed that with careful administration the unlimited retired list, as now authorized, will be able to absorb all disabled officers as soon as they are found to be incapacitated.

OFFICE WORK.

The establishment of a branch office of the Government Printing Office in the "Speiden building" to take the place of the several small printing offices of the bureaus of the War Department has, in my opinion, proved entirely successful, evidenced, so far as this office is concerned, by the expeditious manner in which the daily special order have been printed as well as the manner in which all the work required by this office has been done. The Adjutant-General's Office has gained by this change the services of 9 clerks, who were urgently needed in the examination of Confederate archive papers, and are now so employed.

In closing this report, I take sincere pleasure in recording my appreciation of the general intelligence, zeal, and fidelity of the clerks of the Adjutant-General's Office.

Respectfully submitted.

HON. REDFIELD PROCTOR,
Secretary of War.

J. C. KELTON,
Adjutant-General.

REPORT OF THE ACTING JUDGE-ADVOCATE GENERAL.

WAR DEPARTMENT,
JUDGE-ADVOCATE-GENERAL'S OFFICE,
Washington, D. C., October 12, 1891.

HON. REDFIELD PROCTOR,
Secretary of War:

SIR: I have the honor to submit my report for the year ending September 30, 1891:

Commissioned officers tried by general court-martial:

Records reported upon and submitted to the Secretary of War for action of the President.....	8
Records received, revised, and recorded, not requiring the action of the President, (convicted, 8; acquitted, 2).....	10
Cadets of the United States Military Academy tried by general court-martial:	
Records reported upon and submitted to the Secretary of War.....	1
Records received, revised, and recorded, not requiring further action, (convicted, 2).....	2
Enlisted men tried by general court-martial.....	1,878
Military convicts tried by general court-martial (convicted, 7; acquitted, 1) ..	8
Total tried by general court-martial.....	1,907

Statement of the number of trials by general court-martial for the last twelve years.

Year ending September 30—	Strength of the Army June 30—	Trials by general court-martial.	Year ending September 30—	Strength of the Army June 30—	Trials by general court-martial.
1880.....	26,474	1,543	1886.....	26,254	1,983
1881.....	25,737	1,792	1887.....	26,540	1,640
1882.....	25,647	1,850	1888.....	26,881	1,730
1883.....	25,552	1,985	1889.....	27,519	1,999
1884.....	26,424	2,280	1890.....	27,105	1,782
1885.....	26,898	2,328	1891.....	26,174	1,907

Number of convictions of various offences taken from the records of general courts-martial received at this office during the past year:

Absence without leave.....	412
Allowing prisoner to escape.....	8
Assault and battery.....	114
Assault with deadly weapon.....	24
Assault with intent to kill.....	13
Attempt at suicide.....	1
Breach of arrest.....	38
Burglary.....	2
Conspiracy.....	3
Desertion.....	393
Disobedience of orders of commissioned officer.....	118
Disobedience of orders of non-commissioned officer.....	175
Disrespect to superior officer.....	56

Drunkenness	201
Drunkenness on duty	206
Embezzlement, etc	39
Escaping from guard or arrest	25
Failure to attend drill, roll-call, etc	215
Forgery	4
Indecent exposure of person	3
Larceny	76
Malingering	2
Mayhem	1
Neglect of duty	75
Perjury	1
Quitting guard or post as sentinel	64
Resisting arrest	65
Selling or losing clothing	74
Selling, losing, or wasting Government property	47
Sleeping on post	36
Conduct unbecoming an officer and a gentleman (not included under previous heads)	16
Disorders, etc., charged as "conduct to the prejudice of good order and military discipline" (not included under previous heads)	524
Miscellaneous offences (not included under any previous head)	10

Very respectfully, your obedient servant,

G. NORMAN LIEBER,
Acting Judge-Advocate-General.

REPORT OF THE QUARTERMASTER-GENERAL.

QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., October 3, 1891.

SIR: I have the honor to submit the annual report of the Quartermaster's Department for the fiscal year ending June 30, 1891:

By acts of June 13, 1890, August 30, 1890, and March 3, 1891, there was appropriated for the service of the Quartermaster's Department for the fiscal year 1890-'91, the sum of	\$9,533,437.44
During the year there was deposited to the credit of said appropriations, amounts received from sales to officers, etc., the sum of	372,380.65
Making a total of	9,905,818.09
Of this amount there was remitted to disbursing officers. \$9,024,710.10	
There was paid out on account of settlements made at Treasury of claims and accounts	31,531.10
	9,056,241.20
Leaving a balance available for payment of outstanding obligations incurred or fulfillment of contracts properly entered into within the fiscal year	849,576.89
On the 1st of July, 1890, there was on hand from regular appropriations for the service of the Quartermaster's Department, pertaining to the fiscal year ending June 30, 1890, the sum of	82,639.65
And from appropriations pertaining to previous fiscal years, including those for specific and indefinite purposes, the sum of	989,897.38
Making a total balance on hand, from all appropriations, July 1, 1890, of	1,072,537.03
For specific purposes there was appropriated during the fiscal year ending June 30, 1891	1,659,074.35
During the year there was deposited and transferred to credit of the appropriations other than those for 1890-'91 (shown above) the sum of ..	540,641.52
Making a total of	3,272,252.90

Of said amount there was remitted to disbursing officers the sum of.....	\$865,581.78
There was paid out on account of Treasury settlements and transferred the sum of.....	970,765.75
There was carried to the surplus fund the sum of.....	180,647.05
	<hr/> \$2,016,994.58
Leaving a balance of.....	1,255,258.32

The items of appropriations, remittances, etc., will be found in detail in the accompanying report of the officer in charge of the finance branch.

The business of the Quartermaster's Department for the last fiscal year is given in detail in the reports of the officers in charge of the several branches in this office, which reports are herewith transmitted. Attention is specially invited to the following:

NATIONAL CEMETERIES.

There are 82 national cemeteries and 74 superintendents.

During the fiscal year 9,977 headstones were provided to mark the graves of soldiers, sailors, and marines buried in national, post, private, city, and village cemeteries.

Under the acts of Congress approved March 2, 1889, August 30, 1890, and March 3, 1891, the sum of \$2,092 was paid during the year for the burial, in the Arlington National Cemetery, of indigent ex-Union soldiers, sailors, and marines of the late civil war, who died in the District of Columbia.

The following roadways to national cemeteries, authorized by special acts of Congress, were completed during the past fiscal year:

Roadway to Antietam National Cemetery, at a cost of.....	\$5,199.60
Roadway to Marietta, Ga., National Cemetery, at a cost of.....	8,254.60
Roadway to Corinth, Miss., National Cemetery, at a cost of.....	9,771.53
Extension of roadway to Natchez, Miss., National Cemetery, at a cost of..	5,988.12

R. N. BATCHELDER,
Quartermaster-General, U. S. Army.

HON. REDFIELD PROCTOR,
Secretary of War.

REPORT OF THE PUBLICATION OF WAR RECORDS.

WAR DEPARTMENT, WAR RECORDS OFFICE.

Washington, July 31, 1891.

SIR: The Board to whom, under your direction, the work of continuing the publication of the Official Records of the Union and Confederate Armies has been intrusted, begs leave to submit the following report of its operations during the fiscal year ending June 30, 1891:

On July 1, 1890, twenty-seven volumes of the records had been printed and distributed. The appropriation for publication became a law on August 30, 1890, and became available on the 1st of September following. The increased force authorized by the act was at once employed and the work of publication was resumed, and has been continued without interruption during the year. As a result twenty-one books have been printed and distributed, and four more have been put in type, and are being indexed. These volumes contain the reports of the Mine Run

campaign of the Army of the Potomac, the operations on the Atlantic seacoast in 1863, the Chickamauga campaign, the Chattanooga, Ross-ville, and Knoxville campaigns, including the battles of Missionary Ridge, Lookout Mountain, and the siege of Knoxville, together with the operations of all the armies down to and including the Wilderness campaign in Virginia, and the operations in the Shenandoah Valley, Maryland, and Pennsylvania, up to August 3, 1864. The volumes relating to the Transmississippi region have been completed to include June 30, 1864, and those relating to the Atlantic seacoast to November 30 of the same year.

The preparation of matter for publication has been carried on steadily during the year. The records and files of the War Department and the Confederate archives are being carefully and critically examined under the direction of Mr. Leslie J. Perry, and a large amount of interesting and valuable matter relating to the second series has been copied and prepared for compilation. In the preparation of this series (relating to prisoners of war), the Board has found it to be not only desirable but necessary, in justice to all concerned, to go over the whole ground with extreme care and accuracy before sending any volumes to press. The same sources have also been searched with a view to the completion of the volumes of the first series, and the present outlook is such as to warrant the Board in promising that the volumes covering the military operations of the year 1864 will be put in type during the year ending June 30, 1892.

The work on the atlas of maps and plans, which is to accompany the volumes, has been begun, and a contract for the execution of the first five plates, in colors, by the most improved lithographic processes, has been made and nearly completed. It is hoped that this work will be well advanced during the current fiscal year.

The following notes of work accomplished, in the several departments of publication, will convey an idea of the variety and amount of labor required in connection with the preparation and publication of the several volumes. Two hundred and thirty-one thousand books have been received, and 170,212 have been addressed and distributed; 1,100,000 address labels have been printed; 5,984 books have been sold, and the amount received therefor (\$4,199.25) has been deposited in the Treasury. Fourteen thousand eight hundred and thirteen letters, receipts, and cards have been received, and 7,396 have been written and sent. Sixteen books have been indexed; 240,000 cards have been used in the preparation of the indexes, and 105,200 folios of reports and correspondence have been copied, compared with the originals, and converted into printers' copy. Five thousand six hundred and fifty galleys and 14,119 pages of proofs have been received and revised in connection with the books printed since September 1, 1890.

In closing it gives the Board great pleasure to recognize the efficient assistance they have received from the officers engaged on the work, and from the employes connected with the different departments of the office. Their labors have been zealous and untiring, and the services rendered by them have been entirely satisfactory.

GEO. B. DAVIS,

Major and Judge Advocate, U. S. Army.

LESLIE J. PERRY,

Civilian expert.

J. W. KIRKLEY,

Civilian expert.

The SECRETARY OF WAR.

REPORT OF THE BOARD OF VISITORS TO THE UNITED STATES MILITARY ACADEMY.

COMPETITIVE AND DIRECT APPOINTMENTS.

The relative merits of appointing candidates direct and by competition has been discussed in previous reports, by the newspaper press, and in Congress. This Board was divided in sentiment as to the merits of the two systems and concluded to merely present figures covering a number of years and showing the results obtained under each system. The table given below covers all the classes which have left the academy from 1873 to 1891, inclusive. It shows the total number of candidates appointed for each year during that period, the number appointed by competition, and the number graduating who were appointed under each system. It will be noticed that under the competitive system 60 per cent. graduated and 40 per cent. failed to graduate, while of those appointed direct only 42 per cent. graduated and 58 per cent. failed. It will be also noticed that for the 15 years covered by the table the number admitted was 1,588, of whom only 789, or one-half, graduated.

Number of cadets admitted to the U. S. Military Academy from 1873 to 1891, inclusive, showing number appointed by competitive examination and directly, with number graduated and casualties under each mode of appointment.

Year of entering.	Total number admitted.	Appointed by competition.						Appointed directly.					
		Graduated.	Resigned.	Discharged.	Dismissed.	Died.	Total.	Graduated.	Resigned.	Discharged.	Dismissed.	Died.	Total.
1873	118	34	3	10	.....	.....	47	42	10	19	.....	.....	71
1874	89	13	4	10	1	.....	28	27	10	22	2	.....	61
1875	121	30	8	6	2	.....	46	34	18	22	1	.....	75
1876	98	23	4	16	.....	.....	43	24	11	16	1	.....	53
1877	98	36	4	11	.....	.....	51	20	8	13	4	.....	45
1878	102	22	7	13	1	.....	43	17	23	19	.....	.....	59
1879	88	29	4	14	.....	.....	47	13	14	14	.....	.....	41
1880	73	23	3	5	1	.....	32	14	12	15	.....	.....	41
1881	85	19	6	8	.....	.....	33	24	10	18	.....	.....	52
1882	129	40	7	12	.....	.....	60	35	11	23	.....	.....	69
1883	141	*37	10	20	2	1	70	*30	16	23	1	.....	71
1884	93	24	2	14	.....	2	42	18	7	30	.....	1	56
1885	95	21	9	9	1	.....	40	24	8	23	.....	.....	55
1886	128	44	8	22	.....	.....	74	18	6	20	.....	1	54
1887	127	39	5	19	.....	2	65	15	12	24	.....	.....	51
Total	1,588	434	84	189	8	8	723	355	176	310	9	4	854

* Including eight cadets turned back into the class of 1888.

Competitive:	Per cent.
Graduated	60
Failed to graduate	40
Direct:	
Graduated	42
Failed to graduate	58

The annexed table shows the number of candidates admitted and the number found deficient under the direct and competitive systems, respectively, for the 19 years ending with August, 1891. As in the preceding table, the result is decidedly favorable to the competitive system.

Number of candidates admitted and found not duly qualified at preliminary examinations for admission to the Military Academy from 1873 to 1891, inclusive, by appointment under the competitive and direct methods.

Years.	Competitive.		Direct.		Years.	Competitive.		Direct.	
	Admitted.	Not duly qualified.	Admitted.	Not duly qualified.		Admitted.	Not duly qualified.	Admitted.	Not duly qualified.
1873.....	57	16	61	58	1884.....	40	12	58	30
1874.....	26	10	63	56	1885.....	41	7	54	26
1875.....	46	20	75	47	1886.....	74	25	54	20
1876.....	38	11	60	42	1887.....	70	20	57	36
1877.....	46	27	50	60	1888.....	42	18	50	38
1878.....	40	6	62	39	1889.....	34	14	62	54
1879.....	46	13	42	21	1890.....	39	12	43	41
1880.....	32	10	41	24	1891.....	43	14	54	26
1881.....	23	18	52	42					
1882.....	62	12	67	39	Total.....	878	277	1,086	743
1883.....	69	12	72	44	Per cent.....	76+	24+	59+	41+

REPRESENTATIVE CHARACTER OF THE CADET CORPS.

It is sometimes contended in discussing the merits and usefulness of the Military Academy that its students are selected from special classes and frequently through favoritism. This allegation was effectively refuted by the Board of Visitors for 1887 in a table showing the occupation of the parents of cadets admitted for the period embraced from 1842 to 1887. In presenting the table the Board very justly said that "the Corps of Cadets is a typical representative body of the American people. The lower House of Congress is not more representative in this respect than the Corps of Cadets." An examination of the table shows that cadets are drawn from all ranks and classes of the people. We have supplemented the table in the report for 1887 by another which covers the intervening years, including the present year, thus preserving the statistics on this subject from 1842 to 1891, a period of 50 years.

The following table shows the occupations of the parents of candidates for admission to the Academy for 1887, 1888, 1889, 1890, and 1891:

Occupations.	Number.	Occupations.	Number.
Agents.....	15	Lumbermen.....	3
Architects.....	1	Manufacturers.....	19
Artists.....	2	Mechanics.....	38
Bankers.....	2	Members of Congress.....	5
Bank officers (6 of them bankers).....	12	Merchants.....	92
Barber.....	1	Millers.....	2
Brewer.....	1	Mining.....	4
Brokers.....	6	Musician (band leader).....	1
Builders.....	3	Marble dealer.....	1
Chapmen.....	11	No occupation.....	7
Clerks.....	17	Officers of the Army.....	43
Collectors.....	2	Officers of the Navy.....	4
Commercial travelers.....	4	Oil producer.....	1
Contractors.....	8	Physicians.....	50
County officers.....	5	Pilot.....	1
Dentist.....	1	Policemen.....	2
Editors.....	9	Politician.....	1
Engineers, civil.....	6	Presidents of Insurance Company.....	3
Engineers, mechanical.....	6	Printers.....	2
Farmers and planters.....	145	Professors.....	6
General business.....	5	Publisher.....	1
Hotel keepers.....	8	Ranchmen.....	2
Insurance business.....	5	Real estate.....	7
Lawyers.....	5	Railroad officers.....	8
Lawyers and judges.....	20	Salesman.....	1
Liveryman.....	1	School teachers.....	6

Occupations.	Number.	Occupations.	Number.
State officers.....	4	Dairyman.....	1
Stock dealers (cattle).....	4	Bookkeepers.....	5
Superintendent of gas works.....	2	Librarian.....	1
Steamboating.....	1	Postmasters.....	8
Unknown.....	2	President of Steam Heating Company.....	1
U. S. civil officers.....	6	Fishing master.....	1
Druggists.....	3		

REPORT OF THE CHIEF OF ORDNANCE.

WAR DEPARTMENT, ORDNANCE OFFICE,
Washington, October 1, 1891.

SIR: I have the honor to submit the following report of the principal operations of the Ordnance Department during the fiscal year ended June 30, 1891, with such remarks and recommendations as the interests of this branch of the military service seem to require.

The fiscal resources and expenditures of the Department during the year were as follows, viz:

Amount in the Treasury to the credit of the appropriations on June 30, 1890.....	\$3,994,484.65
Amount in the Treasury not reported to the credit of the appropriations on June 30, 1890.....	452.98
Amount in Government depositories to the credit of disbursing officers and others on June 30, 1890.....	577,091.40
Amount of appropriations for the service of the fiscal year ended June 30, 1891.....	5,882,942.77
Amounts refunded to ordnance appropriations in settling accounts during the fiscal year ended June 30, 1891.....	192,368.49
Gross amount received during the fiscal year ended June 30, 1891, from sales to officers; from rents; from collections from troops on account of losses of or damage to ordnance stores; from Chicago, Rock Island and Pacific Railroad Company; from powder and projectiles (proceeds of sales); from sales of condemned stores; from testing machine, and from all other sources not before mentioned....	63,414.67
Total.....	10,710,754.96
Amount of expenditures during the fiscal year ended June 30, 1891, including expenses attending sales of condemned stores, exchange of powder, etc.....	2,688,486.82
Amount deposited in Treasury during the fiscal year ended June 30, 1891, as proceeds of sales of Government property.....	40,112.25
Amount turned into the surplus fund on June 30, 1891.....	5,184.89
Amount in Government depositories to the credit of disbursing officers and others on June 30, 1891.....	540,378.99
Amount transferred from ordnance appropriations in settling accounts during the fiscal year ended June 30, 1891.....	1,438.49
Amount in the Treasury not reported to the credit of appropriations on June 30, 1891.....	662.24
Amount in the Treasury to the credit of appropriations on June 30, 1891.....	7,434,491.28
Total.....	10,710,754.96

REPORT OF THE CHIEF SIGNAL OFFICER.

SIGNAL OFFICE, WAR DEPARTMENT,
Washington City, October 10, 1891.

ESTIMATES.

On September 15, 1890, estimates for appropriations for the fiscal year ending June 30, 1892, were submitted to the honorable Secretary of War, but subsequent legislation, the act of Congress to increase the efficiency and reduce the expenses of the Signal Corps of the Army, and to transfer the Weather Service to the Department of Agriculture, approved on October 1, 1890, required the revision of the estimates submitted. In Capt. Robert Craig's report is set forth, in detail, the reduction during the past six years in the appropriations for the maintenance of the Service in all its branches. The aggregate amount of money appropriated in both the regular and deficiency bills, including all accounts and claims allowed by the accounting officers of the Treasury Department, is as follows: Fiscal year ending June 30, 1886, \$939,705.72; 1887, \$913,981.23; 1888, \$913,670.27; 1889, \$856,995.38; 1890, \$821,105.21; 1891, \$815,655.19.

This shows a total reduction in annual expenditures of \$174,050.53 in the past five years. Among the larger items of savings may be noted, \$50,000 through the reorganization of the business methods of the central office, thus making possible a corresponding reduction in the force employed; about \$40,000 through the invention of the Chief Signal Officer personally of a new telegraphic weather code, and over \$18,000 in transportation. It should also be set forth that a reduction of \$7,500 in rent occurred through the purchase of the present building and grounds under an act of Congress, which eliminated the item of rent for future years.

The separation of the two branches of the Signal Service resulted in the transfer of the estimates for the strictly military establishment to the Army appropriation bill, which, since 1888, has been charged with the military expenses of the Signal Corps of the Army, as follows: Pay and allowance of officers of the Signal Corps, and the authorized enlisted force of 50 sergeants, \$92,500; signal and telegraphic expenses, \$22,500; officers' salaries, \$5,700; public printing, \$1,500; office stationery, \$275; contingent expenses, \$575. Aggregating \$125,050. In addition, it became necessary to rent for \$2,000 quarters for the Signal Corps sufficient to accommodate the office force and a general supply depot.

At the request of the honorable Secretary of Agriculture, the Chief Signal Officer prepared the estimates wherein was incorporated the present civilian organization of the Weather Bureau. These estimates commended themselves to the Secretary of Agriculture, and were approved by him with certain additional sums intended to carry out the act of Congress approved October 1, 1890, for the extension of the Service in the interest of agriculture. They also commended themselves to the Appropriation Committees of Congress, and, with a very slight reduction, were voted in the appropriation bill for the coming fiscal year. These estimates can be found in detail in the "Book of Estimates," and the resulting sums voted appear in the "Digest of Appropriations."

An increase of over 18 per cent over the Weather Bureau appropriations for the present fiscal year was obtained, there being an actual increase of over 9 per cent in the appropriation bill itself, while there was

a gain in the Weather Bureau of about 10 per cent more by the transfer to the Army appropriation bill of the charges for the support and maintenance of the Signal Corps, military telegraph lines, and the office force of the Chief Signal Officer. This marked liberality of Congress insures the future extension of the Weather Bureau to new and broader fields of usefulness.

While the transfer of the Weather Bureau to the Department of Agriculture took place on July 1, 1891, yet it appears proper to touch on this subject in this report rather than to delay a year. As the delegated representative of the Secretary of War, the Chief Signal Officer transferred the Weather Bureau to the Secretary of Agriculture and his subordinate, the Chief of the Weather Bureau, on the morning of July 1st. At that time the entire force had been paid to include June 30, and all accounts and bills in the office had been adjusted and paid so that there were no arrears of public business of any character.

It is a source of gratification to the Chief Signal Officer that his methods of business were such that to this time, more than three months after the transfer, they are continued without modification of any importance. Three officers of the Army remain on duty, and no change has been made in the forecasting force or methods. It is interesting that as the first predicting official (Prof. Abbe) detailed by the Chief Signal Officer was a civilian, so the first predicting official formally detailed by the Chief of the Weather Bureau was an Army officer, Lieut. Glassford.

A. W. GREELY,
Chief Signal Officer.

REPORT OF THE INSPECTOR-GENERAL OF THE ARMY.

WAR DEPARTMENT,
INSPECTOR-GENERAL'S OFFICE,
Washington, D. C., September 10, 1891.

SIR: Since my last annual report some matters of more than usual interest have occurred.

During the past year there was considerable discussion as to our readiness to encounter one or more European nations in arms. In the last assault upon our sister republic three nations joined at first. Our willingness to resist any unjust assault, either by any combination or single power, has been too well demonstrated to be doubted. Our staunchness in war is believed to be fully equal to our earnest desire for constant peace, and none can expect to gain more from us by war than a just arbiter and our own spirit of fairness would grant without war. We are not prepared to submit with unseemly patience to any indignity; and no one expects it of us. In our preparation for self-protection we need consider only cases of sudden heat and passion, which may be unreasoning, and those positive requirements of the times and of our national life and surroundings, which every statesman can calmly measure as easily as the municipal authorities of a growing city can decide the police force required to protect life and property within its borders, maintain order in its slums, and see that its quiet suburbs are secure.

If the force decided upon is inadequate, the handling of it unskillful, the organization imperfect or the preparation and instruction incomplete, the citizens, of course, expect to pay with their lives, or at least *endanger them* and their property in consequence of any lack or fail-

are in the established force when a struggle is forced upon them. The question is one concerning the duty of the Government toward the people. We can always rely on finding plenty of Americans ready for life or death on any dangerous frontier. Our country is still full of men experienced in the requirements of war who, whenever they care to give the matter consideration, can judge wisely what preparations are needed for war, and how much more would be essential for full success in a series of campaigns and battles; they know we are not adequately prepared now, that, even for proper instruction, men, modern material, and time are needed; for army movements under modern requirements can not be practiced properly with less than an army corps, complete in all its appointments, nor can the study of the new potency and disposition of the three arms required by smokeless powder and magazine guns *en masse* be wisely left to the day and field of actual battle. The least we can do under modern requirements is to maintain an army corps, equipped as perfectly as possible, and practice it annually in the closest connection with as large a mass of the National Guard as can be concentrated.

Our position was admirably summed up by President Harrison in one of his talks from the train to the people on his recent trip to Bennington, when he said:

Our situation is one of great favor. We are pretty widely separated from those who would hurt us, if there are any such. We are secure in our great isolation, and we are secure, too, in our great and patriotic people. We do not maintain armies; we do not need to extend the conscription list until it takes old age and youth. We maintain only the merest skeleton of an army, but we have already seen how speedily it may develop into gigantic proportions, and how, in a few months, it may take on the discipline that makes it the equal of any in the world.

The National Guard. A more complete inspection of the National Guard of the country has been made this year under the auspices of the War Department than was ever before attempted. That the militia of every State and Territory in the Union was not inspected is certainly no fault of the War Department; for an effort in that direction was made, and officers were publicly designated for this duty with each State if his services were desired. Some of the States and Territories, however, did not hold encampments, though details of Army officers were regularly announced to inspect them, if they had been held. One Territory, Utah, is reported as having no militia organization under the Territorial law, though there are several volunteer companies in Salt Lake City.

Nearly, if not quite, all the States and Territories which held encampments of militia had these encampments visited or inspected by officers of the Army, some of whom also acted as instructors. In all instances they were received with courtesy, kindness, and respect, and their services were not only willingly received but often sought after. There is no shadow of doubt that these visits and inspections have resulted beneficially in every instance.

Perhaps the best can never be attained under our effete old system, nor until our service receives its men and horses young enough to be perfectly plastic and receptive to a perfect military training. When horses are received in our service at an age at which they begin to condemn them in Europe, and men are enlisted here at an age after their military training has been completed there, the difficulties here in the way of perfect military training are introduced at the beginning, and our fine officers are entitled to the greatest credit for creating from

such obdurate material as was formerly furnished them such admirable organizations as have established the fame of our Army. Only our officers are received in the plastic years of youth and trained to the finest quality we are capable of. With so large a country and so small an Army as ours there are is no adequate reason that the same principle should not be applied all around. Then the possibility of any adverse criticism would depart. Our army can be made fairly representative of our people and our non-commissioned officers everywhere can be made absolutely satisfactory, as most of them are now, if we adopt the proper means.

The Enlistment of
Indians.

The steps toward converting the almost wild Indians into well disciplined soldiers may not be rapid; and surely it is discreet in the Indians to consider well before taking an oath "to bear true faith and allegiance" to our Government and to obey the orders of the officers set over them, and to adopt every habit of life that is distasteful to them. To be scouts for terms of 6 months was a fine step toward disintegrating and controlling their tribes, as wives were no obstacle, and mounted scouts got 40 cents a day for their ponies. And this new step can certainly be made a success.

There are six things the Indians object to in a regular enlistment: First, the long term; second, living in houses instead of tepees; third, such horses as are given the cavalry; fourth, celibacy, any worthy fellow of 18 should be married; fifth, exile—if they belong to the regiment instead of their tribe, who will say when they may be ordered from home forever; sixth, loss of the 40 cents a day now paid mounted scouts for their ponies.

The men who fought our last war saw the musket bullet shrink from .69 of an inch to .58 of an inch. It is now to be .30 of an inch and fly faster than the earth upon its axis. It may seem only the germ, and speed is everything. Noise and smoke are minimized and almost abolished. There is no choice. The door is open; we must enter and conform our thoughts and practice to the military requirements of the times. While preparing with all zeal to meet the new and more exacting demands of the future, it is well that we can feel that our little Army was never better in all that pertains to a soldier and his trade. Examining his surroundings, even in details, it is easy to see that the clothing was never better and the ration never so good; some of the new barracks may yet be vaunted as models; and the weapons served their purpose well in the past and are handled with constantly increasing skill, and new weapons are being diligently sought that will meet equally well the exigencies of the future: the care and comfort of the garrisoned posts were never better than now; and the practice marches and camps have been instructive and promise to keep the men well trained to the open air: the men themselves are selected with diligent care; and their officers have borne excellently every proper test; and the admirable organizations that have given the Army its fame uphold their established character perfectly,—so that in everything the Army is as reliable and progressive to-day as it has always been.

Respectfully submitted.

J. C. BRECKINRIDGE,
Inspector-General.

The MAJOR-GENERAL COMMANDING THE ARMY.

REPORT
OF
THE SECRETARY OF THE NAVY.

NAVY DEPARTMENT, *December 3, 1891.*

To the President:

Of the new constructions undertaken during this year, by far the most important is Protected Cruiser No. 13. This vessel, of 7,500 tons displacement, is a sister ship to Cruiser No. 12. The peculiar advantages of these two cruisers consist in their extraordinary coal endurance and their high speed, in both of which respects they have no equal among the large cruisers of the world. With a maximum speed of 22 knots an hour and a sustained sea speed of 21 knots, they can safely be counted on, in any ordinary sea, to overtake any commerce destroyer, any commerce protector, or any mercantile vessel now afloat, while their ability to cruise for great distances without recoaling makes them a peculiarly important addition to a navy destitute of coaling stations abroad. Their triple-screw propulsion, one of their most important and original features, is at once effective for high speed and economical for ordinary service. The arrangement of the screws, tending to secure constant immersion in the water, is calculated to prevent the racing so common in single-screw and twin-screw vessels, which leads not only to reduction of speed, but to material increase of loss from wear and tear. Added to these advantages are a complete armor protection against light guns, and a battery comprising one 8-inch and two 6-inch breech-loading rifles of 40 calibers, eight 4-inch rapid-fire guns of the armor-piercing type, with twenty small-caliber rapid-fire guns, and five torpedo tubes, making them formidable antagonists for any vessel they may be called upon to fight.

As with the vessels undertaken in the previous year, the battle ships and No. 12, the Department made the utmost exertions to prevent loss of time in beginning the construction of Cruiser No. 13. The act authorizing the work was approved March 2, 1891. Nine days later, on March 11, the general plans were ready, and the advertisements were issued inviting proposals. The bids were opened June 1, less than *three months afterwards.*

The following were the proposals received for the hull and machinery, including engines, boilers, and appurtenances, in accordance with the plans and specifications approved by the Secretary of the Navy:

Union Iron Works, of San Francisco.....	\$3,793,000
William Cramp & Sons' Ship and Engine Building Co., of Philadelphia..	2,745,000
Bath Iron Works, Limited, Bath, Me.....	2,690,000

The Bath Iron Works were therefore the lowest bidders, their proposal being \$55,000 less than that of Messrs. Cramp & Sons, and \$103,000 less than that of the Union Iron Works.

The question of making an award under these circumstances received the most thorough and careful consideration of the Department, and a decision was made upon the following grounds:

(1) The act of August 3, 1886, requires that each contractor "shall show to the satisfaction of the Secretary of the Navy that within three months from the date of the contract he will be possessed of the necessary plant for the performance of the work in the United States, which he shall offer to undertake." This condition the Bath Iron Works were clearly unable to fulfill. They admitted that they were wholly unable to build the engines of the ship, and they did not propose to build them, but to sublet the contract. Although it is possible to build the hull of a ship at one place and her engines at another, yet the inconvenience of having the hull built at Bath and the engines built at New York would have been so great that this cause alone would have led the Department to hesitate in the case of a ship where the engines were of such vital importance.

(2) The Bath Iron Works admitted that they would be unable to build the ship within the contract time, namely, two years. Three years was the shortest time in which they expected to complete it. My own judgment and observation satisfied me that they could not build it in less than three years and a half.

Finally—and this was the most important reason of all—the Department felt that it would be too great a risk to give the building of such a vessel as Cruiser No. 13 to a new and inexperienced firm which had never yet completed a ship. This vessel, and her sister ship, No. 12, are two of the most important ships of the Navy, and they are by far the most difficult to build. They are to have a guaranteed speed of 21 knots for four hours in the open sea, a condition which, as far as known, no shipbuilding firm anywhere, except Messrs. Cramp, had at that time ever undertaken to fulfill. The statute provides that the contract shall be let to the lowest and best responsible bidder or bidders. Under these circumstances, and in view of the fact that the Messrs. Cramp finally consented to reduce their bid \$55,000 (that is to say, to the figure of the lowest bid), I had no doubt that my duty, under the statute, was to award that firm the contract for Cruiser No. 13 at \$2,690,000.

The second vessel in point of size and importance is the Harbor Defense Ram of 2,050 tons displacement, authorized by the act approved March

2, 1889. Proposals for the construction of this vessel, in accordance with the Department's plans and specifications, were opened December 20, 1890. But one bid was received, that of the Bath Iron Works, of Bath, Me., for \$930,000, and the contract was awarded accordingly, January 28, 1891. Since the execution of the contract, changes in the plans have been made, increasing the length of the vessel 8 feet, thus giving greater berthing capacity for the crew and space for stowage of coal, and admitting a battery of four 6-pounder rapid-fire guns to afford protection against torpedo boats. The change has materially increased the coal endurance and consequent radius of action of the vessel, while the substitution of a solid steel casting for the stem in place of the ram with removable head, as originally designed, gives the vessel greater strength for ramming purposes. The contract requires that the harbor defense ram shall be completed and ready for delivery in 18 months from date of execution.

Proposals for the construction of the torpedo cruiser of 750 tons, authorized by the act of June 30, 1890, were invited October 18, 1890, the bids to be opened February 11, 1891. No bids were received for the construction of this vessel.

The Department has not again advertised for proposals for the torpedo cruiser, it being clear that no one would offer to build her within the prescribed limit. The act authorizing her construction requires her "to have a maximum speed of not less than 23 knots." This high rate of speed requires engines of 6,000 horse-power, and involves a correspondingly heavy expense. To build such a boat, it is estimated that the limit of cost should be increased \$162,000, making \$512,000, instead of \$350,000, as originally projected. In view of the great merits of this type of vessel, I recommend that the law be amended to enable the Department to proceed with her construction.

The act of June 30, 1890, also authorized the construction of a torpedo boat of about 112 tons. Proposals were invited October 18, 1890, for the construction of this boat, and the bids for her construction, in accordance with the bidders' plans and specifications, were opened December 20. The bids were as follows:

Cowles Engineering Company, of Brooklyn, N. Y.....	\$119,140
Herreshoff Manufacturing Company, of Bristol, R. I. (134 tons)	125,000
Herreshoff Manufacturing Company, of Bristol, R. I. (100 tons).....	93,200

After a thorough examination of the bids submitted for the torpedo boat, the conclusion was reached that all the plans and specifications submitted by the bidders were unsatisfactory, and therefore none of the proposals were accepted.

The Department now directed the preparation of plans by the Bureaus, and on June 19, new advertisements were issued, inviting proposals on these plans. These bids were opened August 26, with the following result:

Cowles Engineering Company, of Brooklyn, N. Y.....	\$117,490
Iowa Iron Works, of Dubuque, Iowa.....	113,500

The bid of the Iowa Iron Works being the lowest one received the contract was awarded to that company October 8, for the sum of \$113,500, the vessel to be completed, according to the Department's plans, in twelve months from the date of the contract.

The Navy will therefore have within a year its second torpedo boat, and it bids fair to be an improvement on the *Cushing*, whose excellent qualities have been thoroughly demonstrated; and it is a matter of additional satisfaction that it is to be built upon the interior waters of the country, thus tending to distribute more widely the benefits arising from the shipbuilding industry, and creating plants at a point remote from all possible attack.

PROGRESS OF RECENT CONSTRUCTION.

During the past year four new vessels have been placed in commission, making a total number of thirteen since March 4, 1889, as follows:

Name.	Displacement.	Commissioned.
	<i>Tons.</i>	
Chicago	4,500	Apr. 17, 1889
Yorktown	1,700	Apr. 23, 1889
Petrel	870	Dec. 10, 1889
Charleston	3,730	Dec. 26, 1889
Baltimore	4,400	Jan. 7, 1890
Cushing	99	Apr. 22, 1890
Vesuvius	970	June 7, 1890
Philadelphia	4,300	July 28, 1890
San Francisco	4,083	Nov. 15, 1890
Newark	4,083	Feb. 2, 1891
Concord	1,700	Feb. 14, 1891
Bennington	1,700	June 20, 1891
Montanomah	3,815	Oct. 27, 1891

The vessels remaining under construction, with the acts authorizing them, are as follows:

Act of August 3, 1886: *Puritan, Amphitrite, Monadnock, Terror, Maine, Texas.*

Act of March 3, 1887: *Monterey.*

Act of September 7, 1888: *New York*, Cruiser No. 6, *Cincinnati* (No. 7), *Raleigh* (No. 8), No. 9, *Detroit* (No. 10), No. 11, and the Practice Vessel.

Act of March 2, 1889: Harbor Defense Ram, Gunboat No. 5, Gunboat No. 6.

Act of June 30, 1890: *Indiana, Massachusetts, Oregon*, Protected Cruiser No. 12, Torpedo Cruiser, Torpedo Boat No. 2.

Act of March 2, 1891: Protected Cruiser No. 13.

All the above vessels, with the exception of the torpedo cruiser, already referred to, are making rapid and substantial progress.

The delays in the delivery of armor may cause the dates of final completion of the twelve armored vessels in the list to be somewhat later than was contemplated when the contracts were drawn; but with the increased sources of supply of armor plate now available it is probable that this delay will be short, and it will be much more than compensated for by the superior quality of the armor which has been developed during the past year. In other respects the work upon the armored vessels now building and fitting out is proceeding satisfactorily.

The double-turreted monitor *Miantonomoh* has already been put in commission, and will be ready during this month for such trials as it may be desirable to give her, all her guns being now in position and the work of fitting the roof of the forward turret, which was necessarily postponed until the fourth gun was in place, being within a few days of completion. She will shortly start upon her first cruise. The other vessels of this class, the *Terror*, *Amphitrite*, and *Monadnock*, of 3,990 tons, and the *Puritan*, of 6,060 tons displacement, will be ready to receive their armor as soon as it can be delivered, and their completion may be expected by the spring of 1893. The 10-inch guns of the *Terror* are completed, and will be installed whenever the vessel is prepared to receive them.

The coast defense vessel *Monterey* was successfully launched April 28, 1891, and is now ready to receive her armor. Her 10-inch and 12-inch guns, with their mounts, are well advanced, and will be ready for installation when required. The ship will probably be completed some time in the year 1892.

The *Maine* has made fair progress since her launching, a year ago. The engines have been completed, and a shop trial of them took place on August 31, the power to work them being furnished by the turning engines. This test of the engines gave an opportunity to inspect carefully the adjustment and working of the valves, pistons, and other moving parts, which were found throughout to be highly satisfactory. Their installation is now making rapid progress, and will be completed in the contract time. The vessel will go into dock in December, the wooden backing will be secured in place at once, and the armor put on as fast as delivered. The vessel has for several months been ready for her transverse bulkhead armor, which was received a few weeks ago. Alterations have been made in the plans of the turrets, by which their weight has been reduced 134 tons, and this weight redistributed by increasing the thickness of the proposed barbette armor from 10½ inches to 12 inches, and the side armor from 11½ inches to 12 inches, thus adding materially to the defensive strength of the ship.

The work on the hull of the *Texas* has been especially satisfactory, the delays occurring in the previous year on account of want of material having been entirely overcome, and the ship will be ready for launching next spring. Unfortunately, in January last, work on the boilers was brought to a stop by the destruction of the contractor's boiler shops

by fire, which also damaged the finished work and boiler material on hand, so as to make nearly all of it worthless. New shops and tools have been procured, and after a delay of about eight months the contractors have resumed work on the boilers. Notwithstanding this delay, the vessel is expected to be ready for service early in 1894.

The armored cruiser *New York* was launched successfully on the 2d instant, and her date of trial may be fixed about January, 1893. With her high speed and great coal endurance, a 6-inch protective deck, and 5-inch side armor plates of nickel steel, and a powerful battery well supplied with armor protection against the fire of everything except the heaviest guns, this vessel will be a most important addition to the naval strength of the country.

The work upon the battle ships *Indiana*, *Massachusetts*, and *Oregon* is going on rapidly, the two former having their frames erected up to the armor belt. At present, it is impossible to give with certainty the date of completion of these vessels, as much depends upon the delivery of the armor plates, as required, during the construction of the hull; but the Department has every reason to believe that except for delays on account of armor they would be completed within the contract requirements. According to present probabilities they will be ready for service early in 1894.

The progress of work upon the unarmored vessels of the Navy is equally satisfactory.

The *Detroit*, formerly known as Cruiser No. 10, was launched at the Columbian Iron Works, Baltimore, Md., on October 28, and cruiser No. 9 will be launched this year. Cruiser No. 11, building at the works of Harrison Loring, is nearly ready for launching, and unless her construction is delayed by the assignment of the contractor, which occurred on October 16, she will, together with her sister ships, Cruisers 9 and 10, be ready for service early in the autumn of next year.

Work upon the *Raleigh*, at the Norfolk navy-yard, is being pushed rapidly forward, 219 tons of material having been worked into the hull between July 1 and October 1 of this year. She will be ready for launching next month. The *Cincinnati*, which is a sister ship to the *Raleigh*, will be ready for launching at the New York navy-yard by next spring. Both these vessels will be ready for service early in 1893.

Cruiser No. 6 is under construction at the Union Iron Works, San Francisco, Cal. The work on this vessel is more than one-third completed, her construction having been somewhat delayed by difficulties in obtaining material, but unless further delays are experienced she will probably be completed during the summer of 1893.

Cruiser No. 12, contracted for by Wm. Cramp & Sons, of Philadelphia, is the most important of the unarmored cruisers now building, and her construction is progressing in a highly satisfactory manner, about three-tenths of the hull having been completed on October 1. She should be ready for service by the autumn of 1893.

Gunboats Nos. 5 and 6, building at the Bath Iron Works, are more than half completed, and will be ready for service by next summer.

The steel practice vessel is also approaching completion. Her frames are erected, the outside plating is nearly completed, and many of the interior fittings are finished. About two-thirds of the work on the hull is now completed, and the vessel will probably be ready for final delivery by July, 1892.

Of the three contract vessels put in commission during the past year, the *Newark*, built by William Cramp & Sons, was given her final contract trial on December 22, 1890. During a four-hour test at sea, off the capes of the Delaware, the engines developed an average of 8,869 indicated horse power, the maximum horse power being 9,231. The estimated speed from patent log for the four hours' trial was 19 knots, the ship's displacement at the beginning of the trial being 3,970 tons. The behavior of the vessel during the steam, turning, and other trials was entirely satisfactory, and she is a valuable addition to the list of cruisers available for service.

The *Concord*, built by N. F. Palmer, Jr., & Co., underwent a first contract trial on November 19, 1890, but as the horse power obtained was not satisfactory to the contractors, a second trial was authorized by the Department, and took place in Long Island Sound on January 13, 1891. The engines developed during four hours an average of 3,405 indicated horse power, the maximum horse power being 3,513. The estimated speed of the ship, allowance being made for tide, was 17 knots, the average displacement during the trial being 1,707 tons.

The *Bennington*, a sister ship of the *Concord*, and also built by N. F. Palmer, Jr., & Co., underwent preliminary contract trials on February 26, February 28, and April 1, and her final contract trial on April 2, 1891. This trial took place in Long Island Sound, the engines developing during four hours an average of 3,436 indicated horse power, the maximum horse power at any time being 3,533. The estimated speed of the ship was 17.5 knots, and her displacement 1,700 tons.

The *Concord* and *Bennington* are similar to the *Yorktown*, and carry, for their size, a comparatively heavy battery, while their light draft will permit their use for some services that a larger vessel would be incapable of performing.

Since the last report the *Charleston* has received her 8-inch guns in place of the 6-inch temporarily put on board. The battery of the *Dolphin* has also been improved by the substitution of two 4-inch rapid-fire guns for the 6-inch originally assigned to the vessel.

Of the old wooden ships of the Navy there are in existence two second-rate vessels, the *Lancaster*, the present flagship of the Asiatic Station, and the *Pensacola*, now stationed at Honolulu. The *Lancaster* probably has six years of service before her, but the cruising days of the *Pensacola* are numbered. Ten third-rate vessels remain—the *Marion* and *Alliance* on the Asiatic Station; the *Mohican*, *Iroquois*, and *Thetis* on

hope that substantial deliveries will shortly begin. The Bethlehem plant has been brought to a high state of efficiency, and the company are making still greater improvements.

In view of the delays incident to the work under the Bethlehem contract, the Department, in the summer of 1890, endeavored to secure a second source of supply, and on November 20 of that year entered into a contract with Messrs. Carnegie, Phipps & Co. for 5,900 tons of armor plates at the same price as that stipulated in the Bethlehem contract. The time fixed for deliveries to begin, July 1, 1891, seven months from the date of the contract, was too short to enable the company to complete the necessary extension of its plant. The work has, however, been vigorously pushed, and 150 tons of nickel-steel armor for the *Monterey* have been turned out and are now only awaiting the required ballistic tests prior to acceptance. If this contract had not been made, it is safe to say that the completion of many of the armored ships now under construction would have been postponed for an indefinite period.

The balance of the armor not included in either contract, estimated at between 4,000 and 5,000 tons, will be opened to competition.

The contract with Messrs. Carnegie, Phipps & Co. provided for utilizing nickel in connection with steel in the manufacture of armor. Negotiations have also been entered into with a view of substituting nickel-steel in place of all-steel armor for the vessels included in the Bethlehem contract. Under the appropriation made last year the Department has purchased 4,536 tons of nickel matte, containing about 900 tons of nickel, for this purpose.

The barrette armor of the *Monterey*, for which a special order was given to the Bethlehem Iron Company September 5, 1890, will shortly be submitted to the required ballistic tests.

The supply of armor of domestic manufacture having been provided for as above stated, it remained for the Department to determine finally the material and the method of treatment that should be adopted.

The experiments made last year at Annapolis, described in the annual report for 1890, consisted of a test of the two principal foreign types of armor, the English compound plate and the French all-steel plate, and an entirely new plate, also made in France upon the special order of the Department, of nickel-steel. The result of the trial showed that the compound plate was decidedly inferior, and that as between nickel-steel and all-steel the former had distinct and positive advantages, the all-steel plate being broken into four pieces, while the nickel plate remained absolutely uncracked.

A series of tests made during the following spring and summer confirmed the conclusions formed at the Annapolis trial as to the superiority of nickel-steel, and the Department accordingly decided to adopt it, and made arrangements with the contractors looking to that end.

It remained, however, to give a thorough trial to the first armor of domestic manufacture before beginning to place it upon the vessels, and

for this purpose it was decided to order typical plates, which should be made the subject of an experimental test. This trial was to ascertain two points: first, whether our domestic manufacturers could produce an armor that would stand competition with the material manufactured abroad; and, second, which of the various modes of treatment suggested would give the best results. In reference to the latter point the questions to be considered were the relative merits of rolling and forging in the manufacture, and the effect of a new method of treatment, named, from its inventor, the Harvey process, designed to harden the surface of the plate while retaining the toughness of its body.

Of the six plates tried, three were furnished by the Bethlehem Iron Co., and three by Carnegie, Phipps & Co.

In these trials, which took place at Indian Head on October 31 and November 14, the plates were subjected to tests more severe than had ever been applied at any foreign government trials. Four shots were fired at each plate from a 6-inch gun with an impact velocity of 2,075 feet per second, and an energy of 2,988 foot tons, using the Holtzer projectile of 100 pounds. One shot was then fired at the center of each plate from an 8-inch gun, with an impact energy of 4,988 foot tons, using Firminy and Carpenter projectiles of 210 and 250 pounds weight, respectively. The plates were placed normal to the line of fire.

The results of the trial were in the highest degree satisfactory. Each of the six plates manufactured in this country was superior to the English compound plate, while the nickel Harveied plate and the high carbon nickel plate were superior to all the foreign plates of the Annapolis trial. They may therefore be pronounced in advance of the best armor hitherto manufactured in Europe.

Further light was thrown upon the question of the relative merits of all-steel and nickel-steel armor, and any doubt which may have remained upon that subject was finally set at rest. Of the three plates made by Bethlehem two were of nickel-steel, one treated by the Harvey process, the other not, and the third was of all-steel, Harveied. Both the nickel plates proved to be far superior to the all-steel Harveied plate, notwithstanding the advantages which it may have derived from the special treatment; and both proved superior to the French all-steel plate tried at Annapolis.

A third nickel plate, manufactured by Carnegie, under the rolling process, also showed a marked superiority over the all-steel plate of this year, and both it and the corresponding Bethlehem plate manufactured under the hammer showed a capacity of resistance to perforation fully ten per cent greater than that of the French all-steel plate. In this respect the results furnished by the two American plates manufactured by the different processes (forging and rolling) proved to be remarkably uniform, the 6-inch shots that were fired at them differing in penetration but an inappreciable amount.

The trial thus definitely establishes the fact that armor of excellent quality may be produced by the rolling process, and that forging by

means of the hammer, the greatest source hitherto of expense in manufacture, is no longer to be regarded as an absolute necessity. The importance of this fact can hardly be overestimated, for it raises a probability that within a year or two the armor-producing capacity of the United States may be quadrupled in case of necessity, and that if we had 10,000 tons to let and could give 18 months from date of contract to commence delivery, the cost of manufacture would be reduced from 25 to 33 per cent, while the work hitherto confined to two firms, would be thrown open to a large number of competitors.

Finally the trial shows that the high-carbon nickel Harveved plate is undoubtedly the best armor plate ever subjected to ballistic test.

It may be assumed that the principle of super-carburizing steel to a considerable depth has passed beyond the experimental stage. The question of tempering or churning the carburized armor plate needs, however, further experimental development, and the lack of uniformity in results, indicated in the Indian Head armor trials, may probably be ascribed to this want of experience. The assurance of success, however, is so great as to warrant the Department in making further experiment in this direction with every reason for anticipating a completely satisfactory result.

ORDNANCE.

The following table gives the number of guns required to arm the vessels now authorized, the number of sets of forgings ordered and delivered, and the number of guns completed.

Caliber.	Number of guns required to arm vessels provided for by law.	Number of sets of forgings ordered.	Number of sets of forgings delivered.	Number of guns completed.
4-inch.....	60	35	35	7
5-inch.....	56	29	29	3
6-inch.....	120	134	134	117
8-inch.....	51	51	30	19
10-inch.....	22	25	14	8
12-inch.....	8	8	4	1
14-inch.....	12	12	0	0
Total	347	294	246	156

The delivery of cartridge cases having begun, under the agreement referred to in the report of last year, a test has been made of the 4-inch rapid-fire gun. The results are extraordinarily successful. The primary object of this type of gun is rapidity of fire, and the trial resulted in an actual showing of 5 unaimed rounds in 17 seconds, or at the rate of 16 shots a minute. The gun, breech mechanism, and cartridge cases, all operated in the most satisfactory manner. The remaining guns of this caliber will be rapidly completed.

The trial of the 5-inch rapid-fire gun will take place as soon as cartridge cases can be obtained, with every prospect of equally good results.

The number of heavy guns has largely increased during the past year, and they show marked improvements. These are mainly in the direction of increased length, thereby securing great range and flatness of trajectory, and a consequent ability to be made effective at longer distances. The 6-inch of 35 calibers will be supplied to the *Detroit* and her sister ships. One new 6-inch gun of 40 calibers has been completed and tested with highly satisfactory results. This improved gun will be supplied to the *Cincinnati* and *Raleigh*, and Cruisers Nos. 12 and 13.

The manufacture of 8-inch guns is in advance of the ships upon which they are to be placed. The forgings for two new 8-inch guns of 40 calibers' length, and therefore of exceptionally high range, have been contracted for. These are to form the batteries of Cruisers Nos. 12 and 13.

Of the 10-inch guns, the third and fourth of the *Miantonomoh's* battery have been completed, tested, and placed on board the vessel. Four others are ready for the *Terror*, and the two for the *Monterey* will shortly be finished.

The first 12-inch gun of 35 calibers has been completed and is now, with its mount, at the proving ground for trial. Three more guns of this caliber are in course of construction.

Forgings for the tube and the jacket of the first of the 13-inch guns intended for the armament of the ships of the *Indiana* class have been completed and will shortly be delivered.

No 16-inch guns have yet been called for in the armaments of new ships. If such guns should be found desirable, the gun factory is ready to manufacture them; and a design for this caliber has been completed, which, it is believed, is free from the serious defects that have caused the failure of many foreign guns of the largest caliber.

Close study and observation of the mounts for main batteries in use abroad have enabled the Ordnance Bureau to provide materially improved carriages for the batteries of the new ships. For the 8-inch guns gravity-return carriages, fitted for working by hand, have been decided upon, giving a great gain in simplicity of design, and a saving in weight.

The supply of guns for the secondary batteries is making rapid progress. The Hotchkiss Company, having completed the one hundred and twenty guns previously ordered, has been given further orders for fifty 6-pounders of increased length, and twenty-five 1-pounders of the latest type.

The first of the Driggs-Schroeder 6-pounders having been delivered and successfully tested, a further order for seventy-five of these guns was given to the Driggs Ordnance Company. Rapid progress is being made with the carriages, those for guns of various descriptions being

made interchangeable as far as possible. The system of recoil mounts for rapid-fire guns has proved a complete success in practice, and has shown itself equally applicable to all guns of this system.

The progress of machine guns is being carefully watched, and a trial will shortly be given to the recently improved Gatling gun.

In small arms the Navy Department is only waiting for the decision of the War Department upon the dimensions of cartridge to be adopted for use by the Army. It is highly important that small-arm ammunition for the two services should be interchangeable, and the acquisition of suitable small arms will be begun as soon as this question is settled.

POWDER AND HIGH EXPLOSIVES.

The brown powder for general service use in heavy guns continues to give excellent results.

The most important advance made during the past year in respect to powder consists in the development of a smokeless powder, invented by Prof. C. E. Monroe of the Naval Torpedo Station. The results have exceeded the anticipations formed in reference to this powder. Its successful use has advanced by progressive experiments from the 1, 3, and 6-pounder guns up to the 4-inch rapid-fire gun. In reference to the results accomplished, it is only necessary to say that with charges one-half the weight of those used with ordinary powders, the velocities have been increased nearly 200 foot-seconds, with no increase of chamber pressure. In other respects the powder gives singular satisfaction. It contains no volatile constituents, is not affected by repeated heating for long periods, is uninjured even by boiling in water, gives high and regular velocities with moderate and regular pressures, and thus far has shown all the essential requisites of a normal smokeless powder. It is safe to say that within a short time the use of ordinary gunpowder will be abandoned in calibers of 6-inch and below.

The great value and importance of gun-cotton for naval purposes, and the certainty that the restricted facilities for its manufacture would be a source of great embarrassment in case of war, has led the Department to consider their extension. To this end an offer of an order for 50,000 pounds of gun-cotton was made to Messrs. Dupont, of Wilmington, contingently upon the establishment of a complete plant for its production. The offer was accepted, and within two months the new plant will be in condition to turn out 1,000 pounds of gun-cotton per day. At the same time the capacities of the gun-cotton factory at the torpedo station have been enlarged, and it may be said that in this respect the resources of the Government are now ample.

In Emmensite it is believed that a high explosive has been obtained, which, while as powerful as gun-cotton, can be detonated by a fuse of less sensitive composition than the fulminate fuse required with the latter substance. Experiments during the past year have led to this conclusion, and have resulted in the production of a fuse composition

which, while insensitive to shock and percussion, will, when simply ignited, explode *emmensite* with an effect approaching detonation. In an experiment made at the proving ground an 8-inch shell containing 3 pounds of *emmensite* was exploded by this means and shattered so completely that over 300 fragments were found. Experiments are also in progress to determine the feasibility of firing shells containing large quantities of high explosives from a mortar, and it is believed that these will result in showing the practicability of discharging a high explosive projectile from a powder gun with safety, and exploding it upon impact with certainty. Like other experiments now making in ordnance, the possibilities of these investigations are far-reaching and point to extraordinary developments in the near future.

PROJECTILES.

Until the present year the United States has been entirely destitute of any armor-piercing projectiles. It was stated in the last report that a contract had been made for a quantity of armor-piercing shell manufactured in America by one of the foreign processes. All the 6-inch and about one-half of the 8-inch shell under that contract have been delivered and have passed the required tests, and are now issued to ships as required. The Carpenter Steel Company, the firm which is manufacturing these projectiles, has made gradual departures from the original designs, which have resulted in distinct improvements; and the difference in the effective force of the Navy to-day as compared with its situation a year ago, when it had not a single projectile that could pierce modern armor, is incalculable. It may be added that this change, little more than a revolution, by which we may obtain in America all the armor-piercing shell that we need, has been brought about at very moderate expenditure.

The production of cast iron common shell and shrapnel has continued at the gun factory at a considerably reduced cost. The hopes held out in the last report of the establishment in the United States of a new process of manufacturing forged steel shell have been realized, and a contract has been made with the United States Projectile Company, of Brooklyn, N. Y., for shell of this description for the 4-inch, 5-inch, and 6-inch guns. A quantity of projectiles made by an electric-welding process has also been ordered from the American Projectile Company, of Boston, Mass., and efforts are being made at the same time to domesticate other processes in this country.

TORPEDOES.

The manifest importance of the proper development of torpedoes has induced the Department to put this subject under the special charge of a Torpedo Board, under the Bureau of Ordnance. Questions regarding *the installation* and proper disposition of torpedoes are being rapidly

settled by the Board, and the practical knowledge of this subject has been materially advanced. In the report of last year the fact was stated that the Navy was absolutely destitute of any automobile torpedo, but strenuous efforts have been made to remedy this vital defect, and have resulted in the establishment, by the E. W. Bliss Co., of Brooklyn, N. Y., of a plant for the manufacture of Whitehead torpedoes in this country. The contract was entered into in May last, for one hundred 18-inch torpedoes of the most recent type. The first torpedo is to be ready for trial in a few days, and if found satisfactory, the remainder are to be delivered at the rate of one hundred per month. The successful domestication in this country of the manufacture of the Whitehead torpedo is one of the most important advances in naval development that has been made for several years.

The delays in the completion of the Howell torpedo were fully referred to in the last annual report. Successful experiments with this torpedo will, it is hoped, shortly be made, and the Hall torpedo, constructed at the torpedo station, is approaching completion. The three Patrick torpedoes ordered three years ago have now been delivered.

Important work has been done in the preparation of launching tubes, and other details connected with the use of torpedoes, and the present state of the work is such as to justify the belief that the torpedo outfits may be installed on board our vessels within a short period, and that the torpedo equipments of our new navy will soon equal, if not surpass, those possessed by other nations.

The contract made in 1890 with the Ericsson Coast Defense Company for one 16-inch submarine gun and its projectiles having been greatly delayed, the work has been undertaken at the Washington Gun Factory, the expense to be borne by the contractors. It seems probable that this gun will prove an important adjunct to our defensive armament.

Active investigation has been made of the subject of torpedo defense nets, and portions of such nets, one made in America and the other of the most approved foreign type, have been procured with a view to testing them as soon as the Ericsson submarine gun is available for the purpose. The test will determine which of the two is the most successful, and will lead to the acquisition of another essential instrument of naval operations, which, up to this time, has been entirely wanting.

The *Stiletto* has been placed in a serviceable condition by the installation of a new boiler, and a launching tube is now mounted on deck for the trial of the Howell torpedo. She is therefore now a serviceable second-class boat. Plans have also been prepared for mounting tubes on board the *Cushing*.

The progress made abroad in the construction of submarine boats has been carefully watched, and it is believed that recent developments in the applications of electricity have greatly simplified the problem and point to the expediency of constructing such a boat in the near future.

VESUVIUS TRIALS.

Under date of May 13, 1891, a board of officers, of which Commander R. D. Evans was senior member, was appointed by the Department to determine the following points in regard to the *Vesuvius* and her guns:

- (1) The accuracy of fire at different ranges under favorable conditions.
- (2) The readiness with which the range can be altered.
- (3) The effect of a slight and of a moderate sea and wind.
- (4) The general efficiency of the guns and of the vessel as a platform.
- (5) The actual efficiency of the vessel for offensive purposes.

After a trial lasting for three days, during which two of the vessel's 3 guns were used, the Board reported its conclusions as follows:

The accuracy of fire of the starboard gun under the conditions we consider good; that of the middle and port guns we are unable to criticise, because the valves were not in satisfactory working order. The valve of the starboard gun has been modified by Lieut. Seaton Schroeder, and worked satisfactorily throughout. The range can be very readily altered, the setting of the valves can be changed to any point from extreme to shortest range in five seconds. The effect of a moderate sea and wind on the general efficiency of the guns and their range is very slight. Generally speaking the vessel as a gun platform behaved very satisfactorily. There are many details concerning the steering gear and conning tower which could be very much improved. As to the actual efficiency of the vessel for offensive purposes, the board has little data on which to base an opinion.

On May 20 three shots were fired at a target towed by the *Cushing* at a speed of 10 knots across the line of fire, the *Vesuvius* steaming 17 knots; one of these would undoubtedly have struck a vessel. This the Board considers a favorable showing under the circumstances. The Board considers that the fittings and appliances for loading and firing these guns as fitted are very crude and capable of great improvement. The Board would recommend that the guns should be carefully ranged in some suitable locality where the fall of the projectiles can be accurately determined from shore stations, that some simple and suitable sight should be fitted, and such changes made in the mechanism for loading and firing the guns as may be found advisable, and that the vessel be then subjected to such further tests as will fully determine her efficiency as a torpedo thrower.

In accordance with the recommendation of the Board, a further test of the *Vesuvius* was decided upon, and the Board was directed to draw up a programme therefor. The trial will take place as soon as the Dynamite Gun Company can furnish the necessary projectiles.

ORDNANCE ESTABLISHMENTS.

The development of the gun factory has continued during the year and many improvements have been made in the appliances. The new 110-ton crane has been completed and is in operation. Additional machine tools for small work, a well equipped chemical laboratory, new machinery for the manufacture of breech mechanism and the mounts for rapid-fire guns, and new gun lathes have increased materially the efficiency of the shops. An important improvement has been made by

the adoption of the system of heated air in assembling guns. A furnace has also been erected for treating armor plates by the Harvey process. The results accomplished in the gun factory, both in the character of the work done and in its economy, have justly given it the reputation all over the world of a model establishment, and the experience obtained by the officers who have been on duty at the factory is productive of incalculable benefit to the service.

The growing demands for the naval defense of the Pacific coast, and the great expense entailed by transportation of heavy ordnance freights across the continent, point to the absolute necessity of establishing in the near future an ordnance factory at some point in that neighborhood. Such an establishment should be under the general control of the War Department and the Navy Department, and should do the work of both. The work of the Washington gun factory shows what experience and intelligence can accomplish in this direction, and if Congress should adopt the measure the Navy can furnish the men to carry it out. There is no reason why such an establishment should not duplicate the success which has been achieved at Washington.

The development of the new proving ground at Indian Head will enable the Department shortly to discontinue the use of the old site near Annapolis. The improvements that have been made in the new ground are fully described in the report of the Chief of the Bureau of Ordnance, and the establishment is now in thorough working order. It is highly desirable, in view of the remoteness of the grounds at Indian Head and its want of mail communications, that a special telegraphic wire should be laid between it and the Navy Department.

The naval magazine to replace that abandoned on Ellis Island has been established near Dover, N. J., in the reservation controlled by the Ordnance Department of the Army. The necessary structures are being erected, and the place will become the principal naval storehouse for powder and high explosives on the Atlantic coast.

SHIPS IN COMMISSION.

The past twelve months have given the vessels of the Navy more active employment than they have seen for many years. Especially in the Pacific the demands on the fleet have been numerous and constant.

The North Atlantic squadron, under the command of Rear-Admiral Bancroft Gherardi, consists of the *Philadelphia*, *Miantonomoh*, *Concord*, *Kearsarge*, and *Vesuvius*. The squadron made its usual stay during the winter and the spring in the West Indies and returned during the summer to northern waters, extending its cruise to the eastward as far as Halifax and taking part, in connection with the squadron of evolution, in tactical drills and a naval review in August last. The *Miantonomoh* is now completing her preparations for sea and the *Vesuvius* will shortly undergo a second trial to test the efficiency of her dyna-

mite guns. The other ships of the squadron, consisting of the *Philadelphia*, *Concord*, and *Kearsarge*, have resumed their cruising duty in the West Indies.

The South Atlantic squadron at the date of the last report was under the command of Acting Rear-Admiral William P. McCann, and was composed of the *Pensacola*, *Essex*, and *Tallapoosa*. On the breaking out of the Chilean revolution, in January last, the *Pensacola* was withdrawn for service in the Pacific. Admiral Brown being then at Honolulu, Admiral McCann, in addition to his previous duties, was placed in command of that part of the Pacific station embracing the west coast of South America south of Callao. The *Pensacola* subsequently proceeded to San Francisco. The *Tallapoosa* has also ceased to form part of the squadron, having been condemned and ordered to be sold on the station. In October last, the *Yantic* was ordered to join the squadron. In view of the additional importance recently acquired by this station, the Department has ordered the squadron of evolution to duty in that quarter.

The Pacific squadron, under the command of Acting Rear-Admiral George Brown, consists at the present time of the *San Francisco*, *Baltimore*, *Charleston*, and *Yorktown*, to which the *Boston* will be added on her arrival. Three wooden ships also are attached to this squadron, the *Pensacola*, *Mohican*, and *Iroquois*. The *Baltimore* and *Yorktown* are at Valparaiso, and the *San Francisco* has just been docked at Mare Island. In view of the threatening aspect of affairs in China, the *Charleston*, on August 10, was temporarily detached for service on the Asiatic coast, but she is now returning to her station. The *Pensacola* has remained at Honolulu since her arrival, September 25, and the *Iroquois*, since August 6, has been in service at Samoa.

The enforcement of the *modus vivendi* concluded in June last between the Governments of the United States and Great Britain required the service during the summer in Bering Sea of all the vessels that could be spared. The agreement and the proclamation of the President making it public were signed on the 16th of June. The text of the proclamation was telegraphed to San Francisco and put in type on the afternoon of the same day, and on the next day (the 17th) the *Thetis* sailed for Bering Sea, carrying copies of the proclamation for distribution. She was followed on the 18th by the *Mohican* and *Alert*, and a few days later by the *Marion*. At the close of this duty the *Marion* and *Alert* were ordered to China, and the *Mohican* and *Thetis* returned to San Francisco.

The Asiatic squadron is under the command of Rear-Admiral George E. Belknap, who will shortly be relieved by Rear-Admiral David B. Harmony in the *Lancaster*. The report of the arrival of this vessel is daily expected. The other vessels of the squadron are the *Marion*, *Alert*, *Alliance*, *Monocacy*, and *Palos*. The *Petrel*, which was detached from the North Atlantic squadron on September 9, is on her way to the

Asiatic station. The condition of affairs in China requires these vessels to be constantly engaged on active duty.

The Squadron of Evolution, under Acting Rear-Admiral J. G. Walker, has continued in active training service, having cruised from January to April in the Gulf, and from May to October on the Atlantic coast. In the Gulf it visited Galveston, New Orleans, and Pensacola, and carried on target practice in Tampa Bay. Small arm practice was obtained at Yorktown on the arrival of the squadron in Hampton Roads.

In July, 1891, the squadron was employed in carrying out a programme of fleet exercises and maneuvers in connection with the naval militia of Massachusetts and New York. This programme included, besides the usual drills and target practice, a torpedo attack upon the fleet and landing drills and engagements on shore. The exercises in addition to the training of the militia, afforded valuable experience to the officers and men of the squadron in the actual use of all the new appliances for combat with which the ships are provided.

Other useful experience has been gained by the squadron, especially in the training of commanding, navigating, and watch officers to maneuver vessels with skill and safety in close formation and in narrow waters, and in the training of engineers to gauge and regulate carefully the speed and coal consumption of their engines. The habitual cruising formation of the squadron has been in column at half distance and its speed ten knots. Special practice has been given in entering and leaving port in this formation. As a test of the training which has been acquired by the officers and men of the squadron it may be mentioned that in September, being then composed of seven ships, it entered the harbor of New York from Long Island Sound, maintaining its formation at half distance and its speed of ten knots through Hell Gate and the East River and past the Battery into the North River to Fiftieth street. Later in the season the crews of the vessels obtained further target practice in Long Island Sound.

The *Pinta* has continued on special duty in Alaskan waters and the *Michigan* on the lakes. The *Fern* is employed as a freight boat at various yards and stations, and the *Thetis* is preparing for surveying duty in the Pacific. The training squadron, consisting of the *Jamestown* and *Portsmouth*, has made the usual cruise in the West Indies and Europe, and the *Monongahela*, which was added last year to the force of training vessels, is now in the Mediterranean, whence she will return to complete her cruise in the West Indies.

ATTACK AT VALPARAISO UPON THE SEAMEN OF THE BALTIMORE.

At 2 p. m. on the 16th of October, the *Baltimore* being then at anchor in the harbor of Valparaiso, a number of seamen belonging to the ship went on shore in uniform for liberty, in accordance with the universal practice prevailing on board ships of war in foreign ports. Two

weeks had passed since the surrender of Valparaiso to the Congressional leaders, and the city was quiet. Other foreign war ships in the harbor had already given liberty to their crews, and no reason existed for withholding a like privilege from the crew of the *Baltimore*.

At 6 p. m. the men had been ashore four hours. It is the general testimony that they had been during this period, and were then, orderly, sober, and well-behaved. The first encounter appears to have taken place at this time between one of the crew of the *Baltimore* and a Chilean, who spat in his face. The sailor knocked the Chilean down and was immediately set upon, with his companion, another of the *Baltimore's* crew, by an angry crowd. The two sailors took refuge in a passing street-car. They were dragged from the car by the crowd. One of them, Petty Officer Charles Riggin, was stabbed, and left to die in the street. His companion, Talbot, an apprentice, escaped, but was afterwards arrested, catgut nippers were put on his wrists, and he was struck again and again by the police on his way to prison.

Another petty officer, Johnson, then in a neighboring house, seeing Riggin lying helpless in the street, went to his assistance. The crowd had now left. Finding Riggin still breathing, Johnson took him in his arms to carry him to a drug store near by. At this moment a squad of Chilean police, with fixed bayonets, came up the street. When at close quarters they fired at Johnson, being so near that his face was blackened by the discharge. One shot entered Riggin's neck and shoulder, inflicting a death wound. Another shot passed through Johnson's clothes.

The affair of the street car was only one of many simultaneous attacks made upon the *Baltimore's* men. The attacks lasted for an hour. They were not confined to one locality, but occurred at several widely separated points in the city. In many instances the American sailors were in restaurants and hotels quietly getting supper when attacked by crowds numbering from 25 to 200 men. The part borne by the police in these attacks is shown by the reports. Thirty-six of the *Baltimore's* men were arrested and taken to prison, being subjected on the way to treatment of the utmost brutality. Catgut nippers were placed on their wrists, and in the case of one man, McWilliams, a lasso was thrown around his neck. Williams, another apprentice, 19 years of age, was arrested by a mounted policeman, who put the nippers around his wrists and then started his horse into a gallop, throwing the boy down. Coal-heaver Quigley, in trying to escape from the mob, was struck with a sword by a police officer. Petty Officer Hamilton was dragged to prison dangerously wounded and unconscious, and his companions, attempting to relieve his sufferings, were threatened with blows from musket butts, and compelled to desist.

Coal-heaver Turnbull received eighteen wounds in the back, two of which penetrated his lungs, and subsequently caused his death. Other men were seriously injured, and several of the wounds were caused by bayonet thrusts, clearly showing the participation of the police. As a

result of the attacks, two of the men, Riggin and Turnbull, died, and eighteen others were more or less disabled by wounds.

At the examination immediately following the arrest, which was conducted secretly, a request was made of the authorities by Capt. Schley to allow one of his officers to be present in the court. The request was denied. Before the men were discharged they were required to sign a paper in Spanish. A court official, whom one of the men asked what might be the meaning of the paper, declared that it was a mere form, stating that the signer had not been engaged in the trouble.

The sailors during the attack were without arms and therefore defenseless. Of the 36 men arrested and examined, all were discharged, there being no proof of any violation of the peace on their part. The judicial investigation into the conduct of the men failed to show that a single one was found drunk or disorderly. It is clear that their only offense lay in wearing the uniform of the country to which they belonged.

Whether the attacks upon the seamen of the *Baltimore* were preconcerted or not, their real cause can only be found in the bitter hostility of the Chilians towards the United States,—a feeling largely due to the false and malicious accusations which have been put forth at Iquique and later at Valparaiso in reference to the action of the Navy of the United States during the progress of the revolution.

It is due to the Navy to state that so far from having given cause for such a feeling, its conduct, under the instructions of the Department, has in every respect been fair, just, and temperate.

In March, some time after the revolution broke out, and before anything definite could be learned from the meager sources of information at hand as to the relative strength of the contestants and the probability of either party's success, the Navy Department issued instructions to Admiral McCann, and afterwards to Admiral Brown, which are embodied in the following letter:

NAVY DEPARTMENT,
Washington, March 26, 1891.

SIR: When the United States flagship *San Francisco* is ready for sea you will proceed with her to the waters of Chile, South America, relieve Rear-Admiral W. P. McCann of the command of that part of the Pacific Station, and protect American interests. The duty thus imposed upon you calls for the exercise of great discretion. Owing to the stoppage of communication the Department is without authentic details in reference to the condition of affairs in Chile, and you will therefore be compelled to rely chiefly upon your own judgment in the execution of its orders, in view of the facts as you shall ascertain them.

The Chilean minister at Washington has sent the following communication to the Department of State:

"I regret to inform you of a revolt of a division of the navy of the Republic of Chile in the port of Valparaiso on the 7th of this month. My government has declared the revolted squadron outlawed, and instructs me to inform you that it is not answerable for the acts of the rebels in regard to foreigners or citizens."

On the 4th of March the Department sent to Rear-Admiral McCann, by telegraph, the following instructions in cipher:

Insurgent vessels, although outlawed by Chilean Government, are not pirates, unless committing acts of piracy. Observe strict neutrality. Take no part in troubles further than to protect American interests. Take whatever measures are necessary to prevent injury by insurgent vessels to lives or property of American citizens, including American telegraph cables. Endeavor to delay bombardment by insurgents until American citizens and property are removed, using force, if necessary, only as a last resort, and when serious injury is threatened. American vessels seized by the insurgents without satisfactory compensation are liable to be recovered forcibly, but you should investigate matter fully before taking extreme measures, and use every precaution to avoid such measures if possible.

As a further and more explicit guide for your action you are directed:

(1) To abstain from any proceedings which shall be in the nature of assistance to either party in the present disturbance, or from which sympathy with either party could be inferred.

(2) In reference to the ships which have been declared outlawed by the Chilean Government, if such ships attempt to commit injuries or depredations upon the persons or property of Americans, you are authorized and directed to interfere in whatever way may be deemed necessary to prevent such acts; but you are not to interfere except for the protection of the lives or property of American citizens.

(3) Vessels or other property belonging to our citizens which may have been seized by the insurgents upon the high seas, and for which no just settlement or compensation has been made, are liable to forcible recovery; but the facts should be ascertained before proceeding to extreme measures, and all effort made to avoid such measures.

(4) Should the bombardment of any place by which the lives or property of Americans may be endangered be attempted or threatened by such ships, you will, if and when your force is sufficient for the purpose, require them to refrain from bombarding the place until sufficient time has been allowed for placing American life and property in safety.

You will enforce this demand if it is refused, and if it is granted, proceed to give effect to the measures necessary for the security of such life or property.

(5) In reference to the granting of asylum, your ships will not of course be made a refuge for criminals.

In the case of persons other than criminals, they will afford shelter wherever it may be needed, to Americans first of all, and to others, including political refugees, as far as the claims of humanity may require and the service upon which you are engaged will permit.

The obligation to receive political refugees and to afford them an asylum is, in general, one of pure humanity. It should not be continued beyond the urgent necessities of the situation, and should in no case become the means whereby the plans of contending factions or their leaders are facilitated. You are not to invite or encourage such refugees to come on board your ship, but, should they apply to you, your action will be governed by considerations of humanity and the exigencies of the service upon which you are engaged. When, however, a political refugee has embarked, in the territory of a third power, on board an American ship as a passenger for purposes of innocent transit, and it appears upon the entry of such ship into the territorial waters that his life is in danger, it is your duty to extend to him an offer of asylum.

(6) Referring to paragraph 18, page 137, of the Navy Regulations of 1876, which is as follows:

"If any vessel shall be taken acting as a vessel of war or a privateer without having proper commission so to act, the officers and crew shall be considered as pirates, and treated accordingly;"

you are informed that this paragraph does not refer to vessels acting in the interests of insurgents and directing their hostilities solely against the State whose

hority they have disputed. It is only when such vessels commit piratical acts & they are to be treated as pirates; and unless their acts are of such a character, are directed against the persons or property of Americans, you are not authorized to interfere with them.

(7) In all cases where it becomes necessary to take forcible measures, force will only be used as a last resort, and then only to the extent which is necessary to effect the object in view.

The U. S. S. *Baltimore*, now en route to the Pacific, is assigned to duty on the station under your command.

Very respectfully,

B. F. TRACY,
Secretary of the Navy.

Rear Admiral GEORGE BROWN, U. S. N.,
*U. S. Flagship San Francisco,
Navy-yard, Mare Island, Cal.*

The instructions quoted above, which were prepared in the Navy Department and carefully considered by the Cabinet, show conclusively that the Navy was directed to preserve, in reference to the Chilean controversy, an attitude of absolute fairness and impartiality. So strongly did this disposition prevail among the officers themselves that before these instructions were issued Admiral McCann had already, in February, upon his arrival on the station, published a general order, enjoining the officers and men under his command to maintain the strictest neutrality, "to abstain from discussing or criticising the present unfortunate state of affairs in Chile, and in no way to express any sentiments or opinions, either favorable or unfavorable, to either side."

With such a spirit animating the commander-in-chief, there is no doubt that the instructions of the Department were carried out to the letter. In these instructions the implied assumption by the Chilean Government that the insurgent vessels should be regarded as outlaws was repudiated. Strict neutrality was commanded. So careful was the Department to prevent any erroneous conclusions that might be drawn by officers as to the character of these vessels that it expressly revised and corrected its regulation for the treatment of ships of war acting without a regular commission.

The first distinct cause of hostile feeling was the affair of the *Itata*. This vessel was a transport belonging to the congressionalist party. Having been seized at San Diego for an alleged violation of our neutrality laws, she had broken her arrest and put to sea, placing an armed guard over the United States deputy marshal who had been left in charge of the vessel. He was thus held a prisoner until put ashore miles from the anchorage.

The act of the *Itata* in forcibly removing herself from the legal and actual possession and custody of the United States led the Navy Department, upon receiving information of the facts from the Department of Justice, to order the *Charleston*, then at San Francisco, to proceed at the earliest moment in search of the *Itata*, to seize her if found on the high seas, and to restore her to the jurisdiction of the court.

order was issued on the 8th of May, and the *Charleston* left San Francisco a few hours after.

At the date of this occurrence Admiral Brown, in the flag-ship *San Francisco*, was at Iquique, the seat of the provisional government. Upon hearing of the high-handed proceedings of the *Itata*, Señor Errazuriz, secretary of foreign relations of the council, on May 13, five days after the occurrence, wrote the following letter to Admiral Brown:

IQUIQUE, May 13, 1891.

ESTEEMED SIR: The provisional government has learned by the cablegrams of the Associated Press that the transport *Itata*, detained in San Diego by order of the Government of the United States for taking on board munitions of war, and in the possession of the marshal, left the port carrying on board this official, who was landed at a point near the coast, and then continued her voyage. The Government has learned directly nothing more of the acts of the *Itata* since she left San Diego.

If this news be correct this government would deplore the conduct of the *Itata*, and, as an evidence that it is not disposed to support or agree to the infraction of the laws of the United States, the undersigned takes advantage of the personal relations you have been good enough to maintain with him since your arrival in this port to declare to you that as soon as she is within reach of our orders his government will put the *Itata*, with the arms and munitions she took on board in San Diego, at the disposal of the United States as you may direct, through the worthy agency of yourself, in order that the laws of your nation may follow their course interrupted in San Diego.

I have the honor to subscribe myself, the secretary of foreign relations of the provisional councils of government,

ISIDORO ERRAZURIZ.

The offer made by Señor Errazuriz in the above letter was absolutely voluntary. It was thus the Iquique Government itself, which, within five days of the occurrence, disavowed the act of the *Itata*, and stated its intention to put her, with the arms that she had taken on board, at the disposition of the United States. A want of clearness in reference to the arms to be restored led to a brief correspondence, and, as soon as this point was settled, no time was lost by the Navy Department in revoking the *Charleston's* orders. A message from Admiral Brown to Señor Errazuriz expressed the gratification of the United States Government at learning that those for whom the *Itata* acted disapproved of her conduct.

The *Itata* arrived at the Chilean port of Tocopilla on June 3, and proceeded to Iquique, and, in fulfillment of the voluntary promise made by Señor Errazuriz, sailed on June 13 for San Diego, with the *Charleston* in company, both vessels arriving on the 4th of July.

The next incident which seems to have excited a feeling of ill-will in the minds of the Chileans was the junction of the ends of the submarine cable outside of Iquique. Application had been made by the representative of the Central and South American Telegraph Company, an American corporation, to the authorities of that place, requesting that the company's new cable extending to Valparaíso might be permitted to be opened, and that the northern and southern sections of the cable *might be joined in the neighborhood of Iquique.*

Permission to open through communication having been denied, the company employed the steamer *Relay*, an American vessel, to pick up and connect by a loop outside of the territorial waters the northern and southern sections of its cable. The act was performed in the open sea outside of Chilean territory. It was the lawful act of a private American company performed through the agency of a private American steamer. The U. S. S. *Baltimore* was present when the act took place. Her presence was not due to any specific order of the Department, no orders having been given upon this subject other than the general instructions of the 4th March, the provisions of which are as follows:

Take whatever measures are necessary to prevent injury by insurgent vessels to lives or property of American citizens, including American telegraph cables.

The act was in no way the act of the United States Government, but it was the act of the cable company in the execution of its lawful right to protect and make available for use its own property.

The only other incident of importance in which the Navy has taken part was the visit of Admiral Brown to Quinteros Bay on the occasion of the landing of the revolutionary troops for their campaign against Valparaiso. How little there was in this incident to justify the extraordinary assertions that have been made in regard to it appears from the following report of Admiral Brown, now published for the first time, which gives a full description of the affair:

U. S. FLAGSHIP SAN FRANCISCO, NOVEMBER 14, 1891.

At Sea, Lat. 27° N., Long. 114° 22' W.

Hon. SECRETARY OF THE NAVY,
Navy Department, Washington, D. C.

SIR: On the 10th instant, at 3 p. m., when this ship was under way and steaming out of the harbor of Acapulco, Mexico, I received a cipher dispatch, the following being the translation of the same:

"Did you invite any Chilean officers to accompany you on board the *San Francisco* to witness the landing of Chileans at Quinteros? Did you or any of the officers or your crew, on return on that occasion to Valparaiso, Chile, communicate information about what you saw to any person not connected with your vessel?"

"TRACY."

To the above message I replied:

"Did not invite or take any Chileans. I invited foreign officers. Only German went. No one from this ship gave information. Full information about landing was known at Santiago and Valparaiso before I sailed at noon."

"BROWN."

Before I left Valparaiso there were published and discussed many misrepresentations and falsifications bearing on my going to Quinteros, which I am satisfied emanated from the large English Colony at Valparaiso as a part of their preconceived plans for injuring all Americans in a commercial sense, as also to sustain and strengthen their well-known position with the many sympathizers with the Insurgents.

The subject was freely discussed by them during the time the insurgents were investing Valparaiso, and as soon as the city fell into their hands and Congressional papers which had all been suppressed by the Government, began to be issued,

the subject was occasionally referred to. I was called a "spy," etc., by them. To all this I paid no attention, except on two occasions, to which I will refer later on.

As explanatory to my telegram from Acapulco, I consider it proper that I should place on record the following detailed statement in connection with the subject referred to.

At 9:30 a. m., on August 20, I went on shore and, when near the intendencia, met Maj. Herara, of Vice-Admiral Viel's staff, who speaks English perfectly. On asking if there was any news, he replied that the opposition had landed in force at Quinteros at daylight, and that this fact was known to everybody.

To verify this statement, I went immediately to the office of Vice-Admiral Viel, intendente of Valparaiso, and on meeting him he informed me that it was true that a landing had been made at Quinteros, and that he had informed the President. He gave me the names of all the ships of war, transports, and tugs, and said that about ten thousand men were in the expedition. I asked him if he was sure that a landing had been effected. He then detailed to me the facts that at early daylight that morning he had received a telephone message from the observer at the Valparaiso lighthouse reporting that a large number of vessels were entering Quinteros Harbor. Soon after this, and before 7 o'clock, he received a telegraphic message from the operator at Quinteros stating that the opposition were landing a large force, and giving the names of armed vessels, transports, and tugs, and saying that the operator would move his instrument back to a safe point about 3 miles distant, and when connected would report further.

At about 8 o'clock, the operator reported that the advance of the insurgent force was within a mile of his station, and that he would abandon it at once. At 9 o'clock (a half hour before I had this interview with Viel) he had received a report from Vina del Mar, stating that the enemy was in sight on the high lands on the north bank of the Aconcagua River.

I asked the Admiral what the Government was going to do to oppose the advance of the insurgents. He said that the Government forces had advanced, and that fighting would probably take place to the north of the Aconcagua River; that the insurgents would be attacked and driven back to their ships at Quinteros. He allowed me to look at the maps, and pointed out the location of the insurgents at that time, and the routes which the Government troops would take. I then asked Admiral Viel if this information was to be considered confidential, and he said "No, it is known to every man, woman, and child in Valparaiso and Santiago." (This statement of Admiral Viel was subsequently, at my request, repeated by him in the cabin of the German flagship *Leipzig*, in the presence of Rear-Admiral Valois of the German navy, and Capt. Sampson of this ship.)

I left the Intendencia and walked several squares along the principal street; returned to my boat, and came on board shortly after 10 o'clock. On the street and in the plaza I met several acquaintances, including the United States consul, Col. McCreary, and by everyone was told of the landing at Quinteros. As I neared the landing long lines of railroad cars were being loaded with troops, and some trains had started for Vina del Mar.

On coming on board I sent an officer to the German and French admirals and to the senior English naval officer, and informed them that I would get under way about noon, go to the vicinity of Quinteros and return that evening, and that I would be happy to take any officers with me.

They all knew of the landing having been made. Only one officer, a German lieutenant, came on board to accompany me, and he was the only person who went to Quinteros with me who did not belong to this ship.

I never even intimated that I would take a Chilean with me, and most certainly would have declined to do so had any one of that nationality applied.

We got under way a few minutes after noon (the engine-room log showing that the engines were started ahead at 12:03 p. m.) and steamed to Quinteros, a distance of 18

miles. We made a turn around the bay and returned to Valparaiso, where we anchored at 4:50 p. m.

Both going and returning, we passed two of the insurgent ships, which were under way and evidently on picket duty, and which were in sight from Valparaiso. I did not communicate with these ships nor with any one at Quinteros, because I knew if I did so that it would be said in Valparaiso that I had given information to the Congressionalists.

While returning from Quinteros, I had cipher messages gotten ready for the Department and for Capt. Schley of the *Baltimore*, who was then at Coquimbo. My message to you reported the landing at Quinteros; that to Capt. Schley ordered him to proceed to Valparaiso with dispatch. These messages were taken on shore by an officer as soon as we anchored (he reached the landing at about 5.10 p. m.), and he had to go to Admiral Viel to have my message to you viséd by him and to get him to send the one for Capt. Schley by the government land line, which was then the only means of telegraphic communication with Coquimbo. My cablegram to you had to be viséd by the intendente, as the government agent at the cable office would permit no messages sent that had not received the "visto bueno" of the intendente.

The officer returned on board very promptly, and gave me additional information of the movements of the two opposing armies, and by far more than any one on board of this ship could have imparted, as all we knew was that the insurgents had landed and that the great majority of them had advanced towards the Aconcagua River, which is just 12 miles from Quinteros, and which the main body must have reached before we anchored at Valparaiso, as ten hours had elapsed since their landing.

When in Santiago, on the 10th of September, I was told by our minister, Mr. Egan, Col. Spooner, and Mr. Demorest, that before 11 o'clock on the forenoon of August 20 (the day of the landing) they knew of the landing, and that it was known to every body on the streets.

The two occasions on which I referred to the abusive and utterly false accusations, which were repeated in the English clubs and mentioned in the papers, were, first, when I called on Admiral Montt, President of the Junta Government, at Valparaiso, on the afternoon of August 29, the day after the fall of the city, when I told him of the remarks that had been made by people in Valparaiso about my going to Quinteros. I told him what I had learned before starting, and of all the information I had obtained, and was particular in explaining to him and impressing on him that what I told him was not in any way to be considered in the light of an apology, but only in order that he should be in possession of all the facts.

The second occasion of my referring to this subject was on September 6, in a personal letter to our minister at Santiago, Mr. Egan, in reply to a personal note from him of the day previous. I replied at once in a personal letter to Mr. Egan, and gave him in substance the facts I have stated above relative to my trip to Quinteros.

My letter was published in several of the Santiago papers (which are generally read in Valparaiso); but that part of my letter which stated that I informed Admiral Montt that I had done nothing to apologize for was left out.

In this connection I would state that during the time this ship and the *Baltimore* were in Chilean waters no official act or word on the part of any officer or man of the two ships could possibly have been construed as being in any way other than in the line of the strictest neutrality.

I here state most emphatically that any report, no matter by whom made, relative to my visit to Quinteros Bay on the 20th of August last, which differs from the above statement, is an absolute falsehood, deliberately fabricated for the single purpose of discrediting American interests in Chile.

Very respectfully, your obedient servant,

GEO. BROWN,
Rear-Admiral U. S. Navy,
Commanding U. S. Naval Force, Pacific Station.

It therefore appears that neither in the affair of the *Itata*, whose surrender was voluntarily determined on by the provisional government at Iquique, nor in the presence of the *Baltimore* when the agents of an American cable company spliced their cables on the open sea, nor in the visit of Admiral Brown to Quinteros Bay was there any ground of offense given by the Navy of the United States to any person, party, or government then existing in Chile, nor was any assistance or encouragement of any kind rendered to what was at that time recognized by all the world as in fact the government of the country. Yet it is impossible to account for the series of outrages perpetrated on the crew of the *Baltimore* on any other supposition than that those who concerted them were influenced by the calumnies which had been actively circulated, and that they were aided and abetted by a police guard which should have suppressed them. No charge or even suspicion of misconduct attaches to the men who, on the night of the 16th of October, endeavoring without weapons to defend themselves against an armed attack, were driven by the police to a Chilean prison because they wore the uniform of American sailors.

INCREASE OF THE NAVY.

The old wooden ships of the Navy have now practically passed out of existence. They no longer count even as a nominal factor in naval defense. The sole reliance of the United States to-day for the protection of its exposed seaboard is the new fleet. This has advanced slowly, but its development has been sure. It is a novel branch of industry, but there have been no failures thus far, and the outlook for the ships still in progress is satisfactory. It may fairly be claimed for the work of reconstruction in the future that it will not fall behind the measure of success attained up to the present time.

The course of events during the past year has shown anew the necessity of continuing the development of the Navy. The demands upon it have been constant, and they are constantly growing. The rapid extension of commercial relations has doubled the importance of our interests, especially in the Pacific. It was said a few years ago by a keen foreign observer: "Some day or other there will be a great rivalry of three or four nations in the Pacific for the commerce of those seas, and the country which has cultivated its strength with a view to that contingency will carry off a chief part of the prize." The rivalry has already begun, and the signs are evident on every hand of sharp competition.

It is apparent that the mercantile competitors of this country are to-day enlarging their fields of activity with a more aggressive energy than ever before. No one can fail to observe the indications of a systematic effort to take advantage of the disturbed conditions now prevailing in many of the smaller states. In this movement naval ascendancy plays a large part. The consequences are not far to seek. The estab-

ment of complete commercial supremacy by a European power in the state of the Western Hemisphere means the exclusion of American influence and the virtual destruction, as far as that state is concerned, of independent existence. With the great maritime powers it is only a step from commercial control to territorial control.

If that most important agency in the commercial development of the United States, the Nicaragua Canal, were completed, the strategic situation would be largely modified. At the present time the two seaboards are so remote that each requires its separate system of naval defense. Each has its vulnerable points, and each has neighbors that are well prepared for offensive movements. There is a circle of insular fortresses facing our Atlantic seaboard, the sole object of whose existence is to maintain naval outposts at our doors. There are States in the Pacific, and not large States either, whose fleets are more powerful than any force that we could readily bring to meet them. To protect either seaboard, even when our present authorized fleet is completed, will involve stripping the other at a critical moment.

I believe that public opinion in the United States desires to see this country provided with an efficient naval protection. The press, which represents the best intelligence of the country, speaks on the subject with clearness and emphasis. It believes, and the country believes with it, that this protection is an obligation upon the national government. It does not believe that cities like San Francisco, Seattle, and Tacoma should be open to the attacks of a third-rate power, whose ships, by a sudden movement, may enforce contributions that would pay in advance the expense of a war. If anyone believes that such rapidity of movement is impossible, let him recall the circumstances under which the *Esmeralda* appeared in April last, without warning, close to the Californian coast, sending on the *Itata* to San Diego. As little does public opinion believe that the commercial seaports of the Gulf and the Atlantic should be unprotected from attack by any nation whose fortified harbors and fully-equipped naval dockyards are within forty-eight hours' steaming.

But it is not the seacoast States alone that have a direct interest in naval efficiency. The prosperity of the whole interior depends upon the uninterrupted supply of the demands of a foreign market. If, when war comes, we are not in a position to protect the transportation of our food products, the foreign market will be closed. By the blockade of such great outlets as Galveston, New Orleans, and Mobile in the Gulf, and the Chesapeake and Delaware and New York on the Atlantic, the great industry of the interior will be paralyzed.

It was well said by a former Secretary of the Navy, Hon. J. C. Dobbin, of North Carolina, as long ago as 1854:

But who are interested in the Navy? It is not merely the citizen whose lot is cast along the coast, the wealthy merchant in our cities, the speculator in floating merchandise, but merchants, mechanics, planters, our countrymen all along the coast,

up our rivers, beyond our mountains. The agricultural interest is as much benefited and protected by the Navy as any other. Every planter in every section is not more truly protected by the inclosure around his farm than by our "wooden walls" which float around our coast.

But it is repeatedly said that the United States should avoid war. This is a proposition to which every right-minded citizen must assent. No principle is more firmly established in our national policy, and the Federal officer who would involve this country in a causeless war would be a traitor to his trust. But war does not require the agreement of both parties; it may come upon us without our consent, and even against our will. If a hostile fleet should attack San Francisco to-morrow, war would exist as a fact, although it had not been declared by legislative enactment.

Even if it were impossible to involve this country in war without its consent there are situations in which that consent would be given by a unanimous popular voice. There are outrages which can not go undressed; there are injuries to which no nation can afford to submit. Against such injuries the surest preventive is a strong national defense. To refer again to the words of the statesman whom I have just quoted:

Weakness invites aggression, and never inspires respect; while acknowledged strength and visible preparation command consideration, and are the true safeguards of peace.

There are elements of danger at all times for American interests, and at any moment these elements may be rendered tenfold more active by a European war.

Our situation as a commercial neutral between these mighty contestants, to some of whom our exports of beef and pork and grain and cotton will be a necessity, while to others they will become a main object of attack, is one for which we must make an adequate provision beforehand. The disastrous consequences of our position in 1805-1812, as an unarmed neutral between two unscrupulous belligerents, are well known. The direct losses alone, to say nothing of the indirect injuries, sustained by our merchants during that period amounted to a sum that would have built a navy sufficient to have swept the ships of either one of our aggressors from the ocean. As was stated by the President of the United States more than fifty years ago—

The history of the late wars in Europe furnishes a complete demonstration that no system of conduct, however correct in principle, can protect neutral powers from injury from any party; that a defenseless position and a distinguished love of peace are the surest invitations to war; and that there is no way to avoid it other than by being always prepared and willing, for a just cause, to meet it.

At the last session of Congress the construction was authorized of only one new ship, Cruiser No. 13. Allowing for the delays that usually occur, this ship will probably be ready for commission in about two years. The last of the other ships now under construction will probably be finished at about the same time, unless delayed by the want of

armor. The building operations of the Navy under existing statutes will then come to an end, unless new constructions are authorized at the present session.

The progress of construction during the last eight years has clearly shown the necessity of early authorization. Although the preparations for the construction of No. 13 were hastened to an extraordinary degree, it was six months after the passage of the act before the preliminary work was fairly begun. In the case of the other new vessels built or building, the average time has been about one year and, omitting the *Indiana* and her consorts and Cruiser No. 12, it has been nearly a year and a half. The work of design and calculation necessarily takes a considerable time, and any authority given at the present session of Congress, could hardly reach the point of effectual commencement of work before the spring of 1893.

The estimates for increase of the Navy for the coming year, including hull, machinery, armor, armament, and equipment, show a reduction of \$5,300,000 below the appropriations for the current year, or \$12,300,000 in place of \$17,600,000. A much larger reduction will take place in the following year, which will substantially complete all the work in progress under existing authorizations of Congress. In view of the large reduction in current estimates, and the still larger reductions in the immediate future, it would seem that some new construction might properly and safely be authorized during the present session.

After considering carefully the additions that have been hitherto made to the Navy, and its future necessities, the Department has reached the conclusion that there should be no departure from the policy pursued up to this time of building large armored vessels. Ships of the type of the *Indiana*, now under construction, are undoubtedly the most powerful element of protection that this country can possess.

The main batteries of these ships, which form their most characteristic feature, throw at a single discharge a weight of projectiles of 6,800 pounds, or over 3 tons, with a total energy of 210,000 foot tons; and the energy of the projectile from the 13-inch gun is sufficient to perforate 22 inches of steel at a distance of 1 mile. Their secondary batteries, comprising sixteen 6-pounders and four 1-pounders, discharge 330 projectiles per minute. In addition to her guns, each ship will have torpedo tubes so arranged as to give an all-round fire for the discharge of 18-inch torpedoes, each of which is charged with 250 pounds of a powerful explosive.

It is only by the possession of ships of this type that the defensive strength of the United States can really be measured. We may have many medium-sized cruisers of 4,500 tons or below, which perform useful service in time of peace in carrying the flag about the world, which give practical training to officers and men, and which perform important auxiliary service in war. But when opposed to armored ships these vessels can not be counted as an element of force. If it is conceded that

we require a navy strong enough to resist an attack of any state possessing two modern sea-going armored vessels—and there are many such states that in every other respect are far behind this country—we must have a sufficient number of ships of this type ready to meet them upon either coast. Three such ships, the number that we have provided for up to the present time, are not enough to fulfill even this moderate requirement.

The success which has attended the development of the plans of the three ships of this type, now in process of construction, and the favorable recognition which the designs have universally received, both in this country and in Europe, justify the Department in urging that naval construction should continue upon substantially the same line. The efficiency of the type is beyond question. The cost of the ships, although considerable, is not great for the service they render. It would certainly be poor economy to build in their place second-class armored vessels of the type of the *Maine* and the *Texas*, for example, which, though excellent ships for their size, are not large enough to accomplish the true object of a heavily armored vessel.

One first-class ship would cost certainly one-fifth less than two of the smaller type, and yet have a comparative force so much greater that in an engagement *it would destroy them both without receiving material injury*. It is probable also that the cost of the larger ships will be reduced by the increased facilities which experience has given to our American shipbuilders, and by simplified methods in the manufacture of armor, and the Department therefore recommends that authority be given at the coming session to build two new vessels of the *Indiana* class.

The Department also recommends the early construction of a large armored cruiser, similar in general design to the *New York*. This magnificent vessel, whose functions cover a far wider range than those of an ordinary cruiser, presents an extraordinary combination of great coal endurance, high speed, and efficient armor protection. When to this combination is added a main battery of six 8-inch rifles, and twelve heavy rapid-fire guns, she becomes one of the most formidable vessels in our own or any other navy, and one that can be brought into use for any kind of service. With the exception of the three ships of the *Indiana* class, she is the most important element of defensive strength which this country now possesses.

The tendency of naval construction all over the world, at the present time, in the matter of cruisers, is toward the construction of large vessels. This is caused by the necessity of uniting in a single vessel a battery composed of high-power guns of at least 8-inch caliber, associated with numerous rapid-fire guns; protection in the form of either vertical side armor or a protective deck, or both (as in the *New York*), sufficiently heavy at least to withstand the attack of the rapid fire battery of an adversary; high speed; and, finally, great coal endurance.

The importance of the latter feature is emphasized by a report received within a week from Admiral Brown on board the flag-ship *San Francisco*. It appears that the actual coal endurance of that vessel, which had been estimated at 8,333 knots will not exceed 4,412 knots with the best quality of coal and a clean bottom. With the same coal, good weather, and a foul bottom the coal endurance is reduced to 3,650 knots. A like result has been experienced in all the English ships of this type.

When it is considered that the distance across the Indian Ocean from the Cape to the Straits of Sunda is 5,000 miles, from San Francisco to Callao is 3,900, and from San Francisco to Yokohama 4,880, the limited range of cruising of such a ship becomes strikingly apparent. In fact, it may be said that were it not for the possibility of breaking the voyage and coaling at the Hawaiian Islands, a vessel of this type could hardly get across the Pacific.

It is impossible to fulfil the four requirements stated above, in a satisfactory manner, on a displacement much below that of the *New York*, and in many recent vessels projected abroad this displacement has been exceeded. To attempt to attain these qualities in a smaller vessel inevitably leads to the sacrifice of either the battery, protection, speed, or coal endurance. As an illustration of the requirements of this class of vessels, it is instructive to compare the various designs recently adopted in Europe.

Russia leads the way with the huge armored cruiser *Ruric*, of 11,000 tons displacement. England is now completing the *Blake* and the *Blenheim*, of 9,000 tons, and nine cruisers of the *Edgar* class, of 7,500 tons. France is building the *Dupuy de Lome*, of 6,300 tons. Germany has in course of construction the vessel known as cruiser "H," of 6,000 tons, and it is reported that seven more of this latter type are contemplated. Finally, Spain has ordered six armored cruisers, the first three of 6,900 tons, now approaching completion, while the fourth has been increased to 9,200 tons, and the remaining two will probably be of similar displacement. While comparisons between these vessels would be invidious, it may be stated broadly that in none of these instances has the displacement fallen appreciably below 8,000 tons without a departure, to a greater or less extent, from the high standard of requirements laid down.

Passing from the class of vessels represented by the *New York*, in which the highest efficiency of the cruiser type is reached—in fact, which may be considered the best all-round vessel of any type—it appears that the construction of smaller cruisers or gunboats, of 3,000 tons displacement and less, carrying a heavy battery, but few or no rapid-fire guns, with a light protective deck, moderate speed and small coal endurance, has ceased entirely. In the few vessels of this size that are being designed at present a battery composed entirely of rapid-fire guns of from 4 to 6 inch caliber is the essential feature, and this is

combined with high speed. Whether an adequate coal endurance can be obtained in vessels of this size is not fully settled, and it is clear that they can have but little protection. Until this type is more fully developed and further information is gained as to its efficiency, the Department would not recommend an advance in this direction.

It is to be noticed that these vessels differ essentially from those of the so-called gunboat class. Although the gunboats are handy and reasonably cheap for peace cruising, it is neither wisdom nor economy to build ships for peace cruising only. A vessel like the *Petrel*, which can only steam 12 knots under favorable circumstances, so far from being a help to any squadron to which it is attached, is a continuous source of weakness. The speed of a fleet is that of its slowest ship. If it were desirable to direct a force of cruisers rapidly upon a given point, and the exigencies of the service required that they should proceed there in company, the presence of the *Petrel* would nearly double the length of time required by the operation; and when the force arrived upon the scene of action, her want of speed would reduce her in battle to the condition of a mere target. Nor could any use be made of her in torpedo operations or in blockade.

There is, however, a class of small vessels capable of performing successfully many of the duties now required of gunboats, which are known as torpedo cruisers. The characteristics of the torpedo cruiser are well defined: Small size (about 800 to 1,000 tons), light draft, a speed of 22 knots, adequate coal capacity, rapid-fire guns, and a powerful torpedo armament. It combines the ability to keep the sea of the gunboat, with the speed and formidable armament of the first-class torpedo boat. It has many functions. Acting independently it is a seagoing torpedo boat, a commerce destroyer, or a blockade runner, and can destroy an enemy's torpedo boats, and in blockades its presence is indispensable. In action its duty is to destroy an enemy's torpedo boats, to serve as the support of a torpedo-boat flotilla, and to act as a torpedo boat itself. This is the type of vessel that the Department would propose to build should Congress adopt its recommendation to increase the limit of cost in the vessel authorized by the act of June 30, 1890; and such a vessel would be a valuable addition to the naval force.

For river service on the Asiatic and South Atlantic stations the Navy needs urgently four small vessels of special design. For many years we employed for river service in China two old double-enders that survived the war, the *Ashuelot* and *Monocacy*, roomy side-wheelers of light draft, which could navigate the rivers and carry from point to point a large force of men. The *Ashuelot* was sunk in 1882 and the *Monocacy* is now unseaworthy and practically beyond repair. She is, however, still employed upon river service. Great need has been felt of a vessel to take her place, and the necessity will become still more urgent as soon as she is condemned.

For this purpose I recommend the construction of a vessel specially

adapted for river service, but so constructed as to be capable of the highest military efficiency in the quarter where she is intended to operate. Several types have been proposed for the service. One of the best would be a vessel of about 1,200 tons displacement and having a speed of not less than 17 knots. She should be 230 feet long by about 40 feet beam, and her maximum draft should not exceed 9 feet. The necessity of light draft is emphasized by recent experience. The town of Ichang, the scene of one of the late Chinese riots, could not be reached by any gunboat in the foreign fleets. All of them drew too much water. The battery of the river-service vessel should consist of 4-inch and 1-pounder rapid-fire guns and a number of revolving cannon and machine guns. Such a vessel, which would cost about \$400,000, would immediately prove herself to be the most useful vessel of any foreign power upon that station. With slight modifications such a type would answer both for the Asiatic and South Atlantic squadrons.

Until recently the Department could not urge the necessity of torpedo boats, being without any torpedoes with which to arm them. As stated elsewhere, this defect is now remedied, and with the domestication of the manufacture of the Whitehead torpedo, there is no reason why the construction of these necessary vessels should be longer delayed. The following table shows the comparative situation of sixteen principal States in the matter of torpedo boats, and the position occupied by the United States in the list calls attention forcibly to the importance of providing this economical and effective means of defense.

Torpedo boats built, building, or projected, 1890 and 1891.

Nation.	Number of boats.		Increase during past year.
	1890.	1891.	
France.....	210	215	5
England.....	177	199	22
Germany.....	180	180	.....
Italy.....	152	165	13
Russia.....	143	152	9
China.....	32	69	37
Austria.....	61	65	4
Greece.....	51	51	.....
Holland.....	50	50	.....
Denmark.....	34	34	.....
Norway and Sweden.....	31	34	3
Turkey.....	30	32	2
Japan.....	24	28	4
Brazil.....	15	16	1
Spain.....	15	15	.....
United States.....	1	2	1

The construction of torpedo boat No. 2 at Dubuque, Iowa, represents a new and important step in the development of the resources of this

country for purposes of naval shipbuilding: Hitherto this work has been done almost wholly on the Atlantic and Pacific seaboards. Many rolling mills and shops in the interior, especially in Pennsylvania, Ohio, and Illinois, have performed a share of the work, but the shipbuilding has been done on the coast. The construction of a torpedo boat on the Upper Mississippi, however, opens up great possibilities for development in this direction in the heart of the country.

It should be our policy in the building of our Navy, to create, as far as possible, an equal distribution of benefits, and to promote manufacturing industries and the employment of workmen in all parts of the country. The interior has also a distinct advantage over the coast, in that it is far removed from any possible attack to which our seacoast establishments, private and public, would be peculiarly vulnerable.

It is to be hoped, therefore, that the torpedo boat is only a beginning of naval construction in the interior. Not only this type of vessel, but all the smaller craft of the new Navy, including torpedo cruisers, and particularly the light-draft vessels intended for service on the Asiatic station, should be made the subject of competition by the numerous shops that are to be found in the valley of the Mississippi and the Ohio. There is no reason why facilities for such work should not be found or created at Pittsburg, Cincinnati, Louisville, St. Louis, New Orleans, and other manufacturing points; and every establishment that acquires the plant for building a naval vessel in these waters makes a distinct and important addition to the naval resources of the country.

PERSONNEL.

The report of last year pointed out the necessity of Congressional action in reference to the naval personnel, both of the line and Engineer Corps, and suggested certain measures that might have the effect of a partial remedy.

That the importance of the subject was recognized by Congress appears from the fact that the Senate at its last session, on February 15, 1891, authorized the Committee on Naval Affairs to sit during the recess for the purpose, among other things, of considering bills relative to the personnel of the Navy.

It is the desire of the Department to further and assist Congressional action in this direction by every means at its command. With this object in view it appointed, on June 24, a board of line officers, composed of Capt. R. L. Phythian, Commander F. E. Chadwick, Commander C. H. Davis, Lieut. Commander R. Clover, Lieut. G. W. Mentz, and Lieut. Wm. H. Schuetze, to examine into and report upon the present condition of stagnation in the promotion of line officers, and to recommend such measures as it might deem desirable on the subject, with a view to the increased efficiency of the Navy.

In reference to the Engineer Corps, whose necessities are of a some-

what different character, no board was deemed necessary, the reports of the Engineer-in-Chief having pointed out with clearness and ability the measures considered necessary by him to promote the efficiency of the corps. These measures, and especially the increase in the number of the corps, were made the subject of recommendation in my report of last year. It was then stated that there were not at the time "enough engineer officers in the Navy for ordinary working purposes, and if no additional ships were built an enlargement of the corps would be necessary." A modern man-of-war is a vast and complex machine, needing intelligent and trained minds to insure a perfect working of the parts, failure in any one of which may be fatal at a vital movement; and the sense of responsibility, the physical and nervous strain upon the engineer officer charged with the care and supervision of this network of machinery, is very great. His duties are not only of the highest importance, for upon him mainly depends the efficiency of the motive power, but they are at the same time arduous and dangerous. Manual labor and subordinates are at his service, but he can not be everywhere, and he should have the assistance of men like himself to bear their share of his load.

It is false economy to put in our new vessels all that is most advanced in high-pressure machinery and the multitude of engines and devices by which steam and mechanical appliances are made to do the work of man, and then to provide an insufficient number of officers to control them.

In reference to the line officers, the report of the Phythian Board, transmitted herewith, is commended to the careful attention of Congress. The picture it presents is not overdrawn, and its argument in favor of measures looking to a change will convince any impartial observer that a radical change is necessary. The remedy proposed is believed by the Department, to meet in its general principles, the necessities of the case, although many of its details will require essential modification.

Among the causes of the present stagnation, the most noticeable is the fact that in those classes which entered the Naval Academy during and immediately after the civil war, the numbers actually on the list are far in excess of those which would be found in a normal condition of the service. While the eight classes entering the service during the years from 1852 to 1859, are represented to-day on the Navy Register by fifty-two officers, the succeeding period of eight years, from 1860 to 1867, is represented by 310 officers. Allowing for the larger numbers naturally to be found among the younger men, the normal strength of these classes should be 180.

So much overweighted are the classes below 1860 that if the highest officer of that class were to-day the senior rear-admiral, the officers of the dates from 1860 to 1867 would fill the grades of rear-admiral, commodore, captain, commander, and lieutenant-commander, and the first

ninety numbers in the grade of lieutenant, although the highest officer in the whole number is in length of service only eight years above the lowest. Such a disproportion between length of service and rank can only be productive of the most harmful results. At the present time the twentieth and eighty-fourth commanders differ by only one year in actual length of service, though the dates of their commissions as commanders are over twelve years apart. Even among men of the same date this disproportion exists to an extraordinary extent. The head of the date of 1861 has been a commander for seven years, while the last man of that date is No. 10 on the list of the grade below, and therefore at least two years from promotion, making a difference of nine years between two officers who entered the service almost on the same day.

When the officers in the overweighted classes begin to reach the head of the list, retirements will take place with extreme rapidity. Officers who have reached the age of 55 in the subordinate station of lieutenant will pass through the upper grades with little more than a year in each. It will be impossible when that time comes to order captains to sea for an ordinary cruise, because there will be hardly any captain on the list who will have the length of a cruise to serve before promotion to the rank of commodore. But the serious difficulty is that they will lack not merely the time, but the qualities necessary for the exercise of command. The safety and efficiency of a ship of war depend to-day more than ever upon her commanding officer. He is the directing brain of the vessel. Upon his steadiness of nerve, his coolness and accuracy of judgment, his ability to be bold or cautious at a critical moment, rest the safety of many lives, of property whose value can not be estimated in figures, and finally the preservation of the honor of the flag. Such responsibility can not be safely intrusted to men who are still lieutenants at the age of 55, and who are physically and mentally worn out by a lifetime passed in the routine of subordinate duties.

But this is not all. The officer, after a year as lieutenant-commander, being then 56 years old, will have but six years in which to pass through the grades of commander, captain, commodore, and rear-admiral. The upper grades will thus become a mere asylum for superannuated lieutenants, maintained at an enormous expense, and passing a few months in doing nominal service in grades for whose real duties they have neither the time nor the qualifications. In fact, it may be said that these grades will be a mere conduit to the retired list, for upon the completion of this brief period of useless advancement, the officers will be retired for the rest of their lives on a retired-pay greater than any salary which they have received during the whole period of their active service. The system gives them a compensation of \$2,600 a year, or less, during the actual performance of duty, and then transfers them, after a brief interval, to a retired list where they receive \$4,500 a year without any employment. Such a system is neither sensible nor economical.

The object of any plan of naval promotion is to produce efficient commanding officers. To accomplish this, men must reach the rank and responsibilities of command before they have passed the prime of life, and while they have still a reasonable period of service in prospect.

The first measure proposed by the Board is to reduce the Navy list to a normal condition, with a fair distribution of officers of different ages throughout the different grades, so that there shall be a suitable correspondence between length of service and rank. A slight modification is made in the numbers assigned to the different grades, but retaining the same total on the active list as at present. It is proposed that a board of competent officers shall be convened to nominate for the grades in the active list of the new organization the best officers of the Navy, keeping the present order of seniority among those so chosen, but filling the grades from the top down as far as the selected names will go. From among those not selected a reserve list is to be formed composed of officers qualified for shore duty, who would be so employed at the discretion of the Department, but whose promotion would cease immediately upon their transfer to the new list.

Those who are nominated neither for the active list nor for the reserve list would be retired at once. Vacancies occurring in the active list, after that list had been formed, would continue to be filled as at present, by graduates from the Academy, all of whom would be required to serve as ensigns for three years. The vacancies created by transfers to the reserve list would be gradually filled by admitting ten additional graduates a year, thereby keeping the total list at about its original numbers.

The list having been reorganized, the Board sets forth three principles as the basis of its further recommendations: First, that the object of any system of promotion should be to produce efficient commanding officers; second, that the officer should not be promoted to flag rank or command rank unless he has a certain period of service before him; and third, that final compulsory retirement should be based on length of service rather than upon age, as at present.

To carry out the first two of these principles, the report recommends the following system of selection in making promotions to the two grades which represent respectively flag and command rank. From the head of the list of captains a number of officers, equal to twice the number of vacancies in a given year, is considered as eligible for promotion, and from this number the best are chosen by the Board to fill the vacancies. Their relative rank remains the same as before, but no captain is to be promoted unless he has five years still to serve before retirement. Captains whose names have been twice considered without having been selected for promotion, or who have reached a period of forty-one years of service, retire as captains. A similar plan is adopted in promotions from lieutenant-commander to commander, the necessary period of service in prospect being eighteen years instead of five.

With many of the features of the Board's plan the Department is fully in accord, but it finds others that are open to serious objection. It believes that a scrutiny similar to that suggested in the report is advisable, but it is strongly of the opinion that, before the scrutiny takes place, an opportunity should be given to those officers who may so desire to make, as a voluntary step, the transfer which the scrutiny contemplates. I would recommend that this should be done in three ways: First, by allowing all officers who are veterans of the war to retire on their own application with advancement to the next higher grade; second, by allowing all officers who have passed more than fifteen years in one grade to retire on their own application, with advancement to the next higher grade; third, by allowing all officers having twenty years or more of service to go upon the reserve list on their own application, without further promotion, and subject only to shore employment.

These three measures will secure, first, an honorable retirement in the nature of a well-earned reward for those whose services have been most meritorious; second, the advancement of one step for those who have suffered injustice by reason of long-delayed promotion; and third, it will enable such officers as prefer it to go of their own option upon the reserve list, thus exchanging the benefits of promotion and increased pay for the benefits of shore duty. These measures will also accomplish a considerable part of the necessary reduction of the list by a voluntary instead of a compulsory transfer.

After these voluntary transfers are completed the scrutiny should be held and the selection made, not, as proposed by the Board, of the best officers of the Navy, which is a somewhat invidious ground of distinction, but of those officers *best fitted for sea duty*. The new active list will then include only officers who are fit to go to sea, who want to go to sea, and who mean to go to sea, and they are the only officers who are entitled to promotion. It should also be provided that the numbers selected for this active or sea-going list should comprise not less than 85 per cent of the total number remaining after the voluntary transfers had been made. The large number of vacancies thus made at the foot of the new active list should not be filled at once, but only as casualties occur in the original body of officers composing both the active and reserve lists.

In reference to the question of selection, the Department believes that a limited application of the principle of selection in place of seniority as the basis of promotion is a necessary feature of any successful plan. It has been tried for many years in the Army, and has been found to increase its efficiency in a high degree. It may be that the officers selected for the positions of general officers in the Army are not always the best in the service, but they are never bad or incompetent. There is no reason why the system should not work equally well in the

Navy, or why this branch of the service should be placed relatively at such a serious disadvantage. No system can be considered sound or reasonable which assumes, as does the present system of seniority promotion, that every individual who graduates from the Naval Academy is just as well fitted as any other for positions of high responsibility and command. Its defects have again and again been pointed out by my predecessors, and a change has been repeatedly advocated in the interest of economy and efficiency.

I would therefore recommend in place of the complex system of the Board, the adoption of the system now in force in the Army, as being simpler, better, and more effectual. Under this system the President should be authorized to select from the grade of captains the officer who, in his judgment, is best fitted for the grade above, and the same rule should hold good in promotions from commodore to rear-admiral.

The present system can not endure much longer. With the new ships we must have a personnel whose efficiency is beyond question, and whose excellence is on the increase and not on the wane. No country could afford to keep up such a system and maintain a body of officers such as the line of the Navy will become in a few years under existing conditions. No country could afford to pension in the higher grades officers whose whole time in these grades has been too short to enable them to perform any actual duty, and who hurry one after another, as admirals of a few months' service, to a constantly increasing retired list with constantly increasing rapidity.

I would further recommend that the designations of the grades of rear-admiral and commodore be changed respectively to vice-admiral and rear-admiral, the numbers, pay, and relative rank of the grades remaining the same as at present. The number of captains should be fixed at 60, as recommended by the board.

ENLISTED MEN.

In the annual report for 1889 the condition of the enlisted men was fully discussed. I desire to renew the recommendations made at that time, and especially that the number of apprentices be increased from 750, as now allowed by law, to 1,500. The measures proposed two years ago for the purpose of securing a more permanent class in the corps of enlisted men are again recommended, and it is strongly urged that the principle be adopted of retaining the services of the men for life by substituting a plan of continuous service for the present method of temporary enlistment. The Department believes that for emergencies a four years' term of enlistment should be adopted, and recommends that the laws relating to honorable discharges after three years of service, and to allowances upon a three years' re-enlistment, be amended accordingly.

NAVAL MILITIA.

In my first annual report I called attention to the great importance of a trained militia for the Navy, and the advantages that would result from such an organization both to the regular service and to the country at large.

The subject was further discussed in the report of last year, and it was recommended that an appropriation should be made by Congress for the supply of arms in the same manner as had been done for many years for the land militia. It was predicted at the time that if such an appropriation were made the creation of the naval militia by the States would be assured.

In pursuance of this suggestion Congress, in the naval appropriation act of March 2, 1891, appropriated \$25,000 for the purchase of arms for the militia, to be expended "under such regulations as the Secretary of the Navy may prescribe." This sum became available on the 1st of July, and, in accordance with the terms of the act, a circular was issued and sent to the governors of the several States. The regulations governing the distribution of the appropriation are as follows:

NAVY DEPARTMENT,
Washington, D. C., June 20, 1891.

Under the authority conferred by the naval appropriation act, approved March 2, 1891, in the following terms:

"NAVAL MILITIA: For arms and equipment connected therewith for naval militia of various States under such regulations as the Secretary of the Navy may prescribe, twenty-five thousand dollars,"
the following regulations are prescribed:

(1) Upon receipt of a return from the governor of any State of the number of men actually mustered in and serving in the naval militia of said State, on the 1st day of July, 1891, the Secretary of the Navy will allot to the State making the return, from the general appropriation for the naval militia, a sum equal to \$12 per head for each officer and man so returned.

(2) The balance of the appropriation will be held in reserve until the 1st of October, 1891. Upon the receipt of a similar return on that date the balance will be allotted to the States then making returns, at the rate of \$12 per head for every officer and man returned as actually mustered in and serving on that date in the naval militia of the State, in excess of the number returned on the 1st of July.

(3) Should the number in excess returned on the 1st of October be too great to admit of a distribution at the rate of \$12 per head as prescribed in section 2, the balance remaining over from the July allotment will be distributed pro rata among the States making returns, according to the number returned in excess.

(4) Should a balance remain over after the allotment of October 1, provided for in section 2, it will be allotted pro rata to all the States having a naval militia, in accordance with the whole number of men returned by each State as actually mustered in and serving on that date.

(5) As soon as the allotments are made, in accordance with the above regulations, the amounts allotted will be credited to the States entitled thereto on the books of the Navy Department.

(6) Requisitions for arms and equipments will be made by the governors of States direct to the Secretary of the Navy, who will determine and order which of such arms and equipments, their number and character, shall be issued.

(7) When a requisition is received at the Navy Department the Bureau concerned will be required to give the money value of the stores called for and the Navy Department will determine and order which of said stores, their number and character, shall be issued.

(8) All property issued upon requisition shall be accounted for under the regulations which now govern the accountability for public property in the Navy, and the Navy Department will issue the necessary instructions for the safe-keeping, preservation, inspection, and accountability thereof.

(9) The Navy Department will furnish the governors of the several States possessing a naval militia force with the necessary blank forms to carry out the provisions of the above sections. All returns shall be made to the Secretary of the Navy.

It was desirable that some part of the appropriation should be allotted on the 1st of July to those organizations that were already in existence. This amount was fixed at \$12 per man actually mustered in and serving. As a stimulus to further activity the balance was reserved until the 1st of October, when a further allotment was made to those States whose forces had increased in the mean time, the final balance still remaining being apportioned among all the States having a naval militia organized at that date according to the numerical strength of the organizations.

The fund appropriated by law is not distributed directly to the States, but is applied, under the supervision of the Bureau of Ordnance, to filling requisitions for arms and equipment connected therewith, made by the governors of the several States, in the same manner as the appropriation for the land militia in charge of the War Department.

The result of the three allotments made from the returns received on July 1 and October 1 was as follows:

California	\$8,094.43
New York	7,461.71
Massachusetts	5,123.93
North Carolina	2,203.60
Rhode Island	1,178.16
Texas	938.17

The number of men certified as mustered in and serving in the naval militia is as follows:

California	371
New York	342
Massachusetts	238
North Carolina	101
Rhode Island	54
Texas	43
Total	1,149

The naval militia, therefore, comprises to-day an effective, organized force of over 1,100 men distributed among six States. From information received from various sources, it is beyond question that as soon as the necessary authority is given by enactment of their respective

legislatures, other States will immediately establish organizations, and the number of men in the service will be largely increased.

An estimate of \$25,000 has been submitted for continuing the arming of the militia, but it is earnestly hoped that Congress may see fit to increase this amount in order that this new and most important branch of the service may be placed on a substantial footing.

The Department has endeavored to facilitate and encourage by every means in its power, the training of the State organizations. With this object in view, and also partly to contribute to the training of the Navy itself, the squadron of evolution conducted drills for two successive weeks at Boston and in Long Island Sound for the militia organized in Massachusetts and New York, the two States most advanced in preparation.

The importance of this movement, which is destined to add to the reserve strength of the Navy a considerable force of militia, with all the advantages of thorough preliminary training, will be universally appreciated. It should be helped and forwarded in every possible way. The drills of the naval militia during the past year have shown how much can be accomplished in this direction by organization and discipline. Under the command of capable officers, many of whom have had professional experience, the naval battalions have reached a high state of efficiency, and the establishment of the naval militia must be regarded as one of the important events in the record of our naval progress during the past year.

NAVAL ACADEMY.

The Department desires to urge strongly upon Congress a change in the time of nomination of cadets at the Naval Academy, by which they may be designated a year in advance of the date of admission. For many years a large proportion, sometimes as many as 50 per cent, of the candidates have failed either at the entrance examination or during the course. These failures have been largely due to insufficient preparation. It is an injustice to many deserving young men that they should be forced, often at a few days' notice, to stand an examination for which they have had no opportunity to prepare. Should the system of nomination mentioned fail to give good results, it can easily be changed; but there is every reason to believe that it will reduce to a minimum the objections to the present system.

Under the law as it exists to-day the only offense for which cadets may be tried by court-martial is that of hazing. Although the ordinary discipline of the Academy is sufficient to provide for the punishment of minor offenses, it is desirable that the process of trial by court-martial should be applied in graver cases. The cadets of the Military Academy are subject to the jurisdiction of courts-martial, and I recommend that a general provision of law be adopted extending this jurisdiction, in cases of serious offense, to the cadets of the Navy.

ATTENDANCE OF WITNESSES AT COURTS-MARTIAL.

Naval courts-martial and courts of inquiry have been seriously embarrassed in their proceedings by reason of the absence of power in such courts to obtain the testimony of civilian witnesses in cases where such persons have refused to appear in obedience to summons duly served upon them. Under the provisions of section 1202 of the Revised Statutes, military courts-martial are empowered to compel the attendance of civilian witnesses. I would recommend, therefore, that power be extended to naval courts-martial and courts of inquiry, similar to that vested in military courts, to compel the attendance of civilian witnesses.

CONSOLIDATION OF NAVAL STORES.

The report of the Paymaster-General shows the great benefits derived from the provisions of the act of Congress approved June 30, 1890, directing that naval stores should thereafter be charged as property belonging to the Navy and not to any bureau thereof. It will be remembered that the object of this measure was to throw open to general use the immense accumulation of stores in the hands of separate bureaus, which had been increasing in size for many years, and to prevent such accumulation in future. As had been foreseen the effect has been a marked reduction in the balance of stores on hand. The returns for the fiscal year immediately preceding the passage of the act showed an increase in the balance of supplies on hand of nearly \$300,000 at the close of the year. The returns from shore stations for the last fiscal year subsequent to the passage of the act show a decrease of over \$1,400,000. Of this decrease \$300,000 is due to transfers of accounts, but the actual consumption during the year of old stores on hand, formerly belonging to the several bureaus but made available for general use by the act, amounted to \$569,000. The greatly increased demands of the Navy during the past year have been met to an extent hitherto unprecedented by the use of stock on hand.

The total value of all supplies afloat and at shore stations, although actually increased to the amount of \$1,600,000 by new articles manufactured in the yards, such as guns, gun carriages, anchors, etc., shows a net decrease as compared with the preceding year of \$169,000.

It is obvious that the change thus accomplished has resulted in great saving to the Government, and that the permanent locking up of stores in the possession of one bureau and their extravagant duplication by other bureaus, which prevailed in former years, have practically ceased.

The work of "arranging, classifying, consolidating, and cataloguing supplies," for which a small appropriation was made in the act of June 30, 1890, has only been partially completed and the Department has approved an estimate for an additional \$10,000 for this purpose. The appropriation of this amount, considering the importance of the work, and the increased accountability and care which result from it, is an economical measure.

The system of purchase and custody of supplies now placed, with the exception of some few exempted classes, in the hands of the Bureau of Provisions and Clothing, has shown a marked improvement during the past year. Delays still occur in the delivery of supplies, but the enlarged application of the system is being made with patience and persistence, and its methods are daily becoming more fully perfected. The advantages of the new system are beyond question, and since its establishment the Department has been able to know with exactness, for the first time, the actual condition of its stores.

The position of chief clerk of the Bureau of Provisions and Clothing is one of very great importance, and the compensation is inadequate. It is therefore recommended that it be increased to \$2,500 per annum. A similar increase should be made in the compensation of the chief clerk of the Bureau of Construction.

I desire to renew the recommendation of my predecessor, made in the Annual Report for 1887, upon the suggestion of the Paymaster-General, that Congress may legalize the use of the sum of \$24,500, which was transferred many years ago from the appropriation "Pay of the Navy" to the credit of the cadets' storekeeper at the Naval Academy, to constitute his capital to transact the duties devolving upon him under the law. The required measure is merely a transfer on the books of funds already appropriated. The new fund should be designated "Clothing and other necessities for naval cadets."

I would also renew the recommendation made by me in my previous reports that the name of the Bureau be changed to "Bureau of Supplies and Accounts," which name would accurately define its duties.

NAVY-YARD PLANTS.

In view of the heavy expenditure made necessary at the present time by the large tonnage, and especially by the large armored tonnage of vessels which it has fallen upon this administration to construct, the Department has been unwilling to recommend an immediate appropriation for the improvement of the navy-yard plants for the purposes mentioned in the accompanying reports of the different Bureaus. These improvements will, however, be urgently needed when the new steel fleet now building has been for a time in commission, or if, in the meanwhile, the country should suddenly be called upon to put forth its naval strength.

When mechanical appliances are used so extensively and for such multifarious purposes as is now customary on naval vessels, the necessity of well-equipped repair shops becomes imperative. I have stated in another part of this report that the relatively high cost of navy-yard work is in part due to poorly-equipped shops. If the construction and engineering shops at the general repair yards had been supplied with a plant as complete for its purposes as that which the appropriations of recent years have enabled the Department to develop at the Washing-

ton yard for the manufacture of ordnance, the economical results obtained at the latter yard, which were dwelt upon in the report of last year, might have been more nearly reached elsewhere. At the present time the yards are not properly fitted for ordinary repair work in time of peace, and an extraordinary demand could not be adequately met with the resources now at the command of the Department. Such a demand may occur at any time by the mere coincidence of repair work upon a considerable number of ships.

While, therefore, the Department has stricken out from the Bureau estimates all items of this character which could safely be postponed, it desires to call attention to the subject as one that must sooner or later engage the attention of Congress.

EMPLOYMENT OF LABOR AT NAVY-YARDS.

Not the least important among the new and difficult problems that have confronted the present administration of the Navy Department, is that of the building and repair of modern steel ships and engines in the navy-yards. A part of the work of building new ships should be done at the yards, because the Government must always be in a position to be independent of private contractors; and all of the repair work must necessarily be done there. Until recently this work was confined to wooden ships. During the last administration some repairs had been made upon the *Boston* and the *Dolphin*, and shortly before its close the keel of the *Maine* was laid at New York; but, with these unimportant exceptions, nothing whatever in modern shipbuilding or repairing had been done by the Government navy-yards prior to March, 1889.

The Navy Department was therefore called upon, at the opening of this administration, to start on its own account a new manufacturing business—the construction and repair of steel ships. The previous work of the navy yards on wooden vessels was an entirely different branch of manufacture and of a much simpler character. The hull of the old ship was merely a wooden chamber divided into flats, and the principal work on it was done with the saw, the adze, the chisel and mallet, the auger, and the rest of an ordinary ship carpenter's outfit. It was work that required no mechanical appliances, and only ordinarily skilled manual labor.

The ship of to-day is an entirely different structure. It is built wholly of steel. Every step in construction or in repair, every job of cutting or fastening, no matter how small, requires the use of machine tools and workmen of the highest skill. Not only in the frame and the skin of the ship, but in all its minor appliances, a great change and development have taken place. The war ship of the present day is one of the most complicated machines of modern times. There is no comparison between the difficulties of the old and the new classes of work. They are as different as making a bucket and making a watch.

To illustrate still further the character of this work, it should be stated that the first step in the construction of the steel vessel is the preparation of a complete set of working drawings giving the exact dimensions of each one of the thousands of plates, beams, and angle irons of which the hull is composed, so that they may be ordered of the steel-maker with as little waste of material as possible. Every one of these pieces of steel has its designated place in the finished structure and it must be used in that place only. This requires that every mechanic who has charge of even the smallest job of work should be able to understand readily and without the possibility of error all the indications furnished in the drawings.

Not only in the interpretation of the drawings, but in the actual putting together of the parts, including the framing and plating of the hull, the highest accuracy of workmanship is required. Plates 20 feet long and from 4 to 5 feet wide must be sheared and planed to size so accurately that absolutely water-tight joints may be made between the adjoining plates. The rivet holes must be so carefully marked and punched or drilled that when the plates are bent and assembled in position there may be an exact coincidence between the openings. To force the metal about the rivet-holes so that the rivet may be put in place would cause serious injury to the material and might be a source of actual danger to the ship.

The same accuracy is required in the adjustment of the plating of the hull. With the high speeds now required of naval vessels, the fairness of the lines of the outside plating is a matter of the first importance and must have a serious influence upon the speed attained by the ship.

In addition to the demands made by the mere operation of putting together the parts of the hull there are others caused by the enormous development in number and importance of the internal fittings of modern men-of-war. Since the lightest rapid-fire guns will pierce the side plating of many of our unarmored cruisers, their engines, boilers, and magazines must be covered in by a protective deck of curved shape with its crown placed near the load-water line, and its edges extending some distance below. As this deck is intended to keep out water from the lower part of the hull in case of shot holes above it, it must be thoroughly water tight. Its employment renders difficult the ventilation of the lower part of the ship, and required a great extension of the ventilating system. As an illustration, the appliances in the *San Francisco* for this purpose consist of 2,000 feet of air ducts weighing over 64,000 pounds. In addition to this general system there are eight steam blowers for the fire rooms to supply air to the boilers, and a large number of ordinary air shafts giving natural ventilation from the upper deck.

The protective deck also increases the difficulty of lighting the ship, and makes necessary an electric-light plant. The innumerable water-tight steel bulkheads, through which the electric-light mains must pass, render the installation of the wiring an arduous task, and necessitates

the greatest care on the part of the workmen to insure both water-tightness of the holes through the bulkheads and the satisfactory installation of the conductors.

The minute subdivision of the hulls of ships of war to localize as much as possible the effects of injury to the skin of the ship, either from shot holes or grounding, and to reduce to the lowest point the possible loss of stability and buoyancy, require not only that all the points of juncture at the sides of the compartments should be perfect, but that every opening through the bulkheads should be provided with absolutely water-tight fittings. The *San Francisco* has thirty-five water-tight doors. The failure of one of them to act properly in a time of emergency might produce serious if not fatal results, and when the limitations of weight, always present in naval designs, are considered, the need of the most careful workmanship, both in the manufacture and installation of all water-tight fittings, is apparent.

It is evident that in such a structure as has been described the drainage system must be exceedingly complicated. On the *San Francisco* there are 330 feet of principal drainage pipes, varying from 8 to 11 inches in diameter, and 1,200 feet of branch pipes. This piping is subdivided and suction to the pumps is controlled by ninety valves, and it is connected to sixty suction boxes and strainers. There are also fifty sluice valves connecting different compartments. This system of piping and valves, weighing over 45,000 pounds, requires the greatest care in installation, since its important parts are often in positions difficult of access, where a continued examination is hard to accomplish, and repairs, if made necessary by incompetent workmanship, would be attended with great expense.

Many other classes of fittings might be mentioned, which naval requirements render of a peculiarly novel or complex character. The steering gear must be placed well below the water line in order not to be exposed to the enemy's fire, and is necessarily in a cramped and inaccessible place. The anchor gear requires continually varying arrangements so that the storage of anchors and davits may not interfere with the end-on fire of the battery. Each of these systems has its own set of engines and connections. The operations of distilling and hoisting heavy weights must also be accomplished by machinery. The heavy guns, weighing from 20 to 65 tons each, must be moved, and the turrets, weighing 300 tons each, must be turned by the same appliances.

What has been said of the hull and fittings applies with equal force to the machinery. In the *San Francisco* there are, in addition to the main engines driving the propellers, thirty-seven auxiliary engines, whose collective horse power equals that of the main engines of many of our vessels of a few years ago. The accuracy of the adjustments of the running parts of this machinery, rendered tenfold more necessary by the high rate at which it is required to run, calls for thorough workmanship alike in its construction, maintenance, and repair.

As an illustration of the disastrous results that may follow the fail-

ure of an apparently unimportant part of the machinery may be mentioned the accident that occurred March 23, 1890, to the steamship *City of Paris*. The primary cause of this accident, by which the star-board engine was entirely wrecked and the ship placed in a position of great danger, which only failed of a fatal termination from the excellence of the design and workmanship of the remaining parts, was the wearing down of the bearing in the shaft strut which supported the extreme end of the propeller shaft. The shaft became bent and finally ruptured, and the cessation of all resistance and the consequent increased velocity of the machinery resulted in wrecking the engine. The cause of the accident is said to have been found in the bursting of a small gun-metal ring or liner of the shaft, and this insignificant defect came near resulting in the destruction of many lives and millions of property.

To turn over work of the kind described to unskilled workmen is to imperil the efficiency of our ships, and to ruin the new Navy, which has been built up with such infinite labor and pains, faster than it can be acquired; and, at the same time, to involve the Government, through the Navy Department, in an extravagant and needless expenditure. Considerations of efficiency in the first place, and of economy in the second, therefore, demand that some practical, business way shall be found to secure competent workmen. It has fallen to this administration to be the first to grapple with the question; and I have considered that, no matter how great the difficulties, I should not be justified in shirking or evading the duty.

The question has been: How shall the Navy Department get good foremen and good workmen in its building and repair yards? I have arrived at the conclusion that it can only be done on the same plan as that which prevails in private establishments—to give the places to the best class of mechanics that can be procured for the prices the Government can afford to pay, regardless of any other consideration than their mechanical skill.

The general object proposed above, the necessity of which no one can deny, could not be accomplished without a radical change in organization. Everybody knows, and it is of no use to evade the fact, that the navy-yards have heretofore been used largely for purposes of political patronage. The system which I found in existence placed the power of the appointment of workmen in the hands of the foremen, and the foremen were generally political appointees. With such a system it was impossible that the test of fitness for employment at the yard should be the skill of the applicant; for those by whom he was recommended were not his employers and had no knowledge of his qualifications as a workman. Nor could the foreman, owing his appointment to local influences, resist, even if he so desired, the pressure of personal considerations.

Although in the old days this system must have entailed considerable loss to the Government, yet there being no great demand for skill it did not absolutely prevent the carrying out of work at the yards.

Any man who could bore and mortise could render some service more or less valuable to the Government. But the work which the yards are now called upon to perform can not be done under that system. The workmen must be chosen for their qualities as workmen, and this can only be accomplished by excluding every other consideration than those of skill and competency.

The impending change in the character of navy-yard work and the corresponding change demanded in methods of navy-yard administration were foreseen and fully described by Secretary Chandler at the time when the first steel vessels were begun. In his annual report of 1883, in speaking of the navy-yards, he uses the following language:

These establishments must first be thoroughly reorganized in such a way as to exclude all political considerations from their management, otherwise bad and expensive work will be the result. We can not afford to destroy the speed of our naval engines in order to make votes for a political party. Whatever other governmental agency may be conducted with partisanship a great naval workshop, dealing with the hull of a modern steel steamship, its fittings and equipment, and with the complexities of its machinery, can not be successfully so managed. No charge of favoring private shipbuilding establishments should deter any one from asserting that, until the navy-yard workshops are managed on business principles and without regard to politics the construction and repair of the new American navy should be committed to those builders who employ or discharge their foremen and all their artisans according to their skill as mechanics and without caring for their political opinions or votes.

It became evident to me, after two years' experience in the Department, that in order to obtain the kind of workmen required in the navy-yards a specific change of organization was necessary, and a plan for the selection of foremen and other superintending mechanics was put in operation in April last. All the superintending positions at the yard were declared vacant, and a board of officers, whose impartial character was universally recognized, and whose members were practical men, most of them experienced in manufacturing, was appointed to find out the best mechanics to fill the places. Public notice was given, and all mechanics were allowed to compete.

The Department appointed in every case the man whom the board reported as best among the applicants for the position. In some cases the board reported that none of the candidates who appeared were qualified. In these cases, the best among the candidates was appointed temporarily, and the Department is now making a second effort to secure thoroughly competent men in their places.

The next step was to provide for the selection of workmen. The method adopted, which was put in operation on the 1st of September last, was to open an office at each yard, where all applicants could register. This office is in charge of a board, also composed of practical men, either heads of departments at the yards or their assistants, all of whom are commissioned officers.

The board classifies the applicants according to their trades, the only requirement for registration being that they shall be American citizens, and that they shall bring certificates from previous employers that they

know their trade. When workmen of any particular trade are needed in any department of the yard the head of the department makes a requisition on the board. The board sends in a list of names, taking them in the order of their application, but giving preference to those who have had experience in navy-yard work. The head of the department, on receiving the names from the board, takes the same course that would be followed by the superintendent of a private establishment. He sets the men to work and finds out their fitness for employment, grading them according to their skill if they are good workmen, and if they are not, rejecting them altogether.

Every man whose name is sent to him by the Board must have a trial. It may be a short trial, but the superintendent must try him and come to a conclusion about him. When he rejects men he sends their names back to the Board and new names are supplied until he obtains the mechanics he needs. The registration books, as well as the reasons for rejection in each case, form a permanent record, which enables the Department to maintain an effective supervision and to see that no favoritism is practiced.

The above system may not be the best that can be devised, but it is the best that has so far presented itself, and if anyone can suggest an improvement on it, the Department will be ready to adopt it. It is practically the same system that prevails in any great manufacturing establishment. In such an establishment employment is not governed by personal considerations of any kind. It is a question of good work on the one hand and of dollars and cents on the other. The Navy Department, as far as its manufacturing business is concerned, stands on the same footing. It proposes to obtain efficiency of work, and thereby secure economy of cost. And as efficient work requires mechanics of high skill, it proposes to select and retain only such workmen as can show that they have the required skill by actual trial.

It has always been recognized that the cost of work in the navy-yards was greater than in private yards. I believe that this difference should not exist, and that by the application of a proper system it may be corrected. That the recent change in organization will be a long step in that direction I do not doubt.

The cost of construction in the yards, in recent years, noticeably in the *Maine* and *Cincinnati*, has proved no exception to the general rule of navy-yard work. Apart from the reduced hours of labor, and the interruptions caused by pressing demands for the repairs of ships in commission, this cost is due to three causes: First, the want of an adequate construction plant; second, the total want of experience of the whole naval organization in work of this character, and the sudden and extraordinary demands that have been made upon it; and third, the want of a practical system to govern the employment of labor. The first of these causes is gradually being remedied by the improvement of the plant, as appropriations are made from time to time by Congress. The second is a defect which time alone can cure, but

which it has already partly cured. The third the Department has endeavored to meet by the adoption of the new regulations.

As the new system only went into complete operation on the 1st of September last, it is too soon to show the full results of its workings, but it may be stated that during the last three months, when unusual demands were made upon the yard organization for the repairs of ships in commission, the system was put to a severe test, and the voluntary testimony of the officers of these vessels as to the efficiency and promptness with which the work was done is a conclusive proof of the benefits resulting from the new system. It is especially to the "fidelity, energy, and zeal of the navy-yard workmen" that the communications of these officers refer. This result has been brought about not only by the introduction of new and efficient foremen and workmen, but by the discharge of those who are incompetent, and the influence of a new stimulus upon those who remain, all of which is the direct result of the new system.

In reference to the exclusion of political considerations from navy-yard employment which the recent orders have brought about, I deem it proper to call attention to the following statutes, by which the administration of the navy-yards is placed on a footing distinct from every other Department of the Government:

SEC. 1544. Labor shall be employed in the several navy-yards by the proper officers in charge with reference to skill and efficiency, and without regard to other considerations.

SEC. 1546. No officer or employé of the Government shall require or request any workman in any navy-yard to contribute or pay any money for political purposes, nor shall any workman be removed or discharged for political opinion; and any officer or employé of the Government who shall offend against the provisions of this section shall be dismissed from the service of the United States.

The head of this Department is as much bound by the above laws as by any other on the statute book; and whatever method is adopted to carry them out, he has no choice but to see that they are faithfully executed.

COST OF THE NEW NAVY.

In accordance with the provisions of the naval appropriation act of March 2, 1891, as follows: "The Secretary of the Navy shall incorporate in his next annual report a statement, showing the name and tonnage of each vessel that has been completed since March four, eighteen hundred and eighty-five, when authorized to be built, when begun, and when commissioned, its entire cost of construction, including armor, armament, equipment, and premiums, and its cost for repairs since completion; and, also, a statement showing the name and tonnage of each vessel not completed, when authorized to be built, when begun, the probable date of its completion, the amount expended upon its construction, including armor, armament, and equipment, and the estimated amount required for its completion, including armor, armament, equipment, and premiums," the following table is submitted:

REPORT OF THE SECRETARY OF THE NAVY.

Statement showing the name and tonnage of each vessel that has been completed since March 4, 1885; when authorized to be built, when begun, and when commissioned; its entire cost of construction, including armor, armament, equipment, and premiums, and its cost for repairs since completion.

Name.	Tonnage.	When authorized to be built.	When begun.	When commissioned.	Cost of construction.	Armament.	Outfit under steam engineering, construction, and equipment.	Special repairs and other out-standings unpaid June 30, 1891.	Premiums.	Total cost of construction, including armament, equipment, and premiums.
Chicago	4,500	Mar. 3, 1883	July 26, 1883	Apr. 17, 1889	\$1,183,628.21*	\$292,257.50	\$111,936.71	.....	.....	\$1,587,823.42
Atlanta	3,189	.....do	July 23, 1883	July 19, 1886	700,000.00*	177,912.75	95,480.99	.....	.....	973,393.74
Boston	3,180	.....do	.....do	May 2, 1887	700,000.00*	178,290.89	88,248.45	.....	.....	966,529.34
Dolphin	1,485	.....do	.....do	Dec. 8, 1885	350,000.00*	34,278.79	37,715.08	.....	.....	421,994.47
Newark	4,083	Mar. 3, 1885	Oct. 27, 1887	Feb. 2, 1891	1,309,430.89	169,448.22	115,095.90	\$48,419.12	\$38,857.70	1,699,851.73
Charleston	4,044	.....do	Dec. 28, 1886	Dec. 26, 1889	1,164,504.10	181,954.05	121,500.55	.....	.....	1,467,958.70
Yorktown	1,700	.....do	Jan. 31, 1887	Apr. 23, 1889	480,242.65	114,247.78	60,005.36	.....	39,825.00	694,410.79
Petrel	890	.....do	Dec. 22, 1886	Dec. 10, 1889	307,998.55	51,280.37	70,033.79	.....	.....	429,310.71
Baltimore	4,000	Aug. 3, 1886	Dec. 17, 1886	Jan. 7, 1890	1,426,504.93	209,294.92	118,446.91	.....	106,441.80	1,860,688.56
Vesuvius	725	.....do	Feb. 11, 1887	June 7, 1890	317,555.33	.....	8,020.40	.....	.....	325,575.73
Cushing	116	.....do	Mar. 1, 1888	Apr. 22, 1890	98,666.29	.....	1,809.95	.....	.....	100,476.24
Philadelphia	4,324	Mar. 3, 1887	Oct. 27, 1887	July 28, 1890	1,399,336.19	190,298.02	98,396.04	25,000.00	100,000.00	1,819,020.85
San Francisco	4,083	.....do	Oct. 26, 1887	Nov. 15, 1890	1,607,642.57	183,471.70	120,233.81	.....	100,000.00	2,011,348.08
Concord	1,700	.....do	Nov. 15, 1887	Feb. 14, 1891	529,362.14	81,888.42	66,458.55	28,989.19	.....	704,648.30
Bennington	1,700	.....do	.....do	June 20, 1891	487,798.41	80,328.11	51,429.76	53,767.63	.....	673,323.91
Total	.....	.....	.....	.....	12,062,669.26	1,950,942.12	1,165,492.75	174,125.94	383,124.50	15,736,354.57

*Cost and valuation by appraisement June 29, 1889 (and including in the case of the Chicago \$33,629.21 additional expenditures for completion since appraisement).

In reference to the report of "cost of repairs" called for by the act, it should be stated that the account technically known as Repairs of ships, which furnishes the items here reported, includes not only repairs strictly so-called, but all alterations made for the purpose of increasing the efficiency of the ship, its hull, engines, battery, ventilation, drainage, steering gear, etc. The introduction of new and improved appliances, with which the earlier ships were unprovided, also appears under this head. A considerable proportion of the expenditures charged to the account of repairs is caused by defects in original design and internal arrangement, by improvements in the character of ship's fittings, and by changes found necessary when they were put into actual service. In some cases these changes were made before the ships went on their first cruise. Such items are in the nature of improvements rather than repairs and they increase by so much the permanent value of the property. Nor does the account make any distinction between ordinary repairs, due to wear and tear, and extraordinary repairs, due to casualty, such as the breaking of the hawse pipes of the *Chicago*, when getting up anchor in the swift current of the Mississippi, or the injury to the bottom of the *Boston*, caused by striking a rock in Newport Harbor.

The following table shows the amounts charged to the completed ships, under this head, on the books of the Department July 1, 1891, the amounts in the case of the first four vessels being those that have accrued since the date of appraisal:

Name.	Amount.	Name.	Amount.
Chicago.....	\$42,765.46	Vesuvius.....	\$10,984.98
Atlanta.....	44,510.59	Cushing.....	6,118.89
Boston.....	61,002.97	Philadelphia.....	15,951.87
Dolphin.....	31,955.09	San Francisco.....	747.68
Newark.....	430.20	Concord.....	1,748.22
Charleston.....	33,040.05	Bennington.....	.....
Yorktown.....	31,416.59	Total.....	296,638.00
Petrel.....	14,570.78		
Baltimore.....	1,394.05		

REPORT OF THE SECRETARY OF THE NAVY.

Statement showing the name and tonnage of each uncompleted vessel authorized to be built since March 4, 1885; when begun, the probable date of its completion, cost of construction (including armor, armament, and equipment), to June 30, 1891, with estimated amount required for completion, to include armor, armament, and equipment.

[NOTE.—This statement does not include premiums that may be earned, as the amount of such premiums is wholly speculative.]

Name.	Tonnage.	When authorized to be built.	When begun.	Probable date of completion.	Expended in construction (exclusive of armament).	Expended by Bureau of Ordnance for armament in process of manufacture.	Material in hands of general storekeepers purchased for ships, but not yet expended.	Total amount expended upon construction, including armor, armament, and equipment.
Maine.....	6,648	Aug. 3, 1886	Nov. 5, 1887	1893	\$1,584,240.75	\$101,641.00	\$50,080.00	\$1,735,961.75
Texas.....	6,300	.....do	Nov. 8, 1887	1894	904,047.20	115,266.00	117,121.00	1,136,434.20
Monterey.....	4,048	Mar. 3, 1887	June 14, 1889	1892	1,093,083.78	274,878.00	.....	1,367,961.78
New York.....	8,150	Sept. 7, 1888	Aug. 28, 1890	1893	1,298,800.07	121,802.00	.....	1,410,602.07
Cruiser No. 6.....	5,500	.....do	July 10, 1890	1893	894,719.43	29,000.00	.....	923,719.43
Cincinnati.....	3,183	.....do	Sept. 26, 1889	1893	493,173.36	33,028.00	45,877.00	571,978.36
Raleigh.....	2,000	.....do	.....do	1893	528,800.74	24,778.00	74,564.00	628,142.74
Cruiser No. 9.....	2,000	.....do	Nov. 2, 1889	1892	342,481.92	11,059.00	.....	353,540.92
Cruiser No. 10.....	2,000	.....do	.....do	1892	841,438.18	11,059.00	.....	852,497.18
Cruiser No. 11.....	2,000	.....do	Nov. 11, 1889	1892	295,071.67	11,059.00	.....	306,130.67
Gunboat No. 5.....	1,050	Mar. 2, 1886	Apr. 12, 1890	1892	122,560.24	8,432.00	.....	130,992.24
Gunboat No. 6.....	1,050	.....do	.....do	1892	120,119.90	8,432.00	.....	128,551.90
Harbor defense ram.....	2,050	.....do	Jan. 22, 1891	1892	6,170.14	.....	.....	6,170.14
Indiana.....	10,200	June 30, 1890	Nov. 19, 1890	1894	7,503.01	20,400.00	.....	27,903.01
Massachusetts.....	10,200	.....do	.....do	1894	8,005.96	20,400.00	.....	28,405.96
Oregon.....	10,200	.....do	.....do	1894	7,554.96	20,400.00	.....	27,954.96
Cruiser No. 12.....	7,400	.....do	.....do	1893	500,897.86	12,078.00	.....	512,975.86
Torpedo Boat No. 2.....	112	.....do	Oct. 8, 1891	1892	.....	.....	.....	.....
Cruiser No. 13.....	7,350	Mar. 3, 1891	Aug. 31, 1891	1894	3,298.80	.....	.....	3,298.80
Faritan a.....	6,000	Aug. 3, 1886	June 24, 1889	1893	137,814.82	.....	54,855.00	192,669.82
Monadnock.....	3,990	.....do	Mar. 24, 1890	1893	277,060.87	94,000.00	29,000.00	399,060.87
Amphitrite.....	3,990	.....do	Aug. 30, 1890	1893	152,051.10	94,000.00	44,564.00	290,615.10

Terrord									
Miantonomoh	3,900	do "	Apr. 25, 1880	1893	328,834.24	156,461.80	31,331.00	808,428.74	
	3,900	Mar. 3, 1887	Aug. 13, 1887	1891	554,238.89	215,511.00	8,137.00	777,906.88	
Total					9,501,980.03	1,440,886.50	442,100.00	11,390,966.53	
Practice cruiser	838	Sept. 7, 1883	July 18, 1890	1892	62,794.71			62,794.71	
Tugboat No. 1	192.4	Mar. 2, 1889	Dec. 20, 1890	1892	11,677.68			11,677.68	
Tugboat No. 2	192.4	do	do	1892	11,677.68			11,677.68	
Tugboat No. 3	192.4	do	do	1892	11,677.68			11,677.68	
Total					35,033.04			35,033.04	
Grand total					9,599,807.78	1,446,886.50	442,100.00	11,488,794.28	

→ Completion authorized.

The cost of the monitors stated in this table includes the expenditures incurred subsequent to the passage of the acts authorizing their reconstruction, namely, of August 3, 1896, for the *Puritan*, *Monadnock*, *Amphitrite*, and *Terror*, and of March 3, 1897, for the *Montanovich*. The expenditures prior to these dates are as follows:

<i>a</i> Expenditures made prior to August 3, 1886.....	\$981,702.40
<i>b</i> Expenditures made prior to August 3, 1886.....	622,703.87
<i>c</i> Expenditures made prior to August 3, 1886.....	577,231.67
<i>d</i> Expenditures made prior to August 3, 1886.....	500,850.53
<i>e</i> Expenditures made prior to March 3, 1887.....	1,492,900.75

Total..... 4,204,451.33

Statement showing the name and tonnage of each uncompleted vessel authorized to be built, etc.—Continued.

Name.	Estimated amount required for completion from June 30, 1891.						Total estimated amount required for completion, including armor, armament, and equipment.	Total cost.
	Bureau Construction and Repair.	Bureau Steam Engineering.	Hull armor.	Armament.		Bureau Equipment.		
				Gun protection.	Guns, etc.			
Maine.....	\$486,111.00	\$286,950.00	\$344,850.00	\$329,450.00	\$236,710.00	\$89,000.00	\$1,773,071.00	\$3,540,041.75
Texas.....	570,000.00	365,210.00	183,700.00	428,450.00	227,898.00	91,000.00	1,860,258.00	3,002,692.29
Monterey.....	543,252.00	192,363.00	218,000.00	156,750.00	81,008.00	35,250.00	1,227,523.00	2,590,086.78
New York.....	1,025,730.00	860,530.00	133,650.00	392,150.00	180,481.00	35,725.00	2,628,304.00	4,038,408.07
Cruiser No. 9.....	1,007,872.00	479,568.00	14,850.00	110,000.00	218,400.00	41,000.00	1,961,750.00	2,387,909.43
Cincinnati.....	600,223.00	448,980.00		33,000.00	114,606.00	65,000.00	1,281,808.00	1,833,388.36
Raleigh.....	344,996.00	448,980.00		33,000.00	122,856.00	65,000.00	1,014,832.00	1,642,915.74
Cruiser No. 9.....	167,997.00	151,734.00		14,850.00	130,829.00	29,500.00	497,910.00	851,450.92
Cruiser No. 10.....	168,977.00	159,507.00		14,850.00	130,829.00	29,500.00	501,663.00	854,155.18
Cruiser No. 11.....	293,631.00	156,171.00		14,850.00	130,829.00	29,500.00	625,001.00	921,131.67
Gunboat No. 5.....	150,870.00	81,155.00		11,275.00	75,529.00	25,425.00	343,754.00	474,736.24
Gunboat No. 6.....	151,070.00	81,155.00		11,275.00	75,529.00	25,425.00	344,454.00	473,005.90
Harbor defense ram.....	620,317.00	364,461.00	402,050.00		9,400.00	12,100.00	1,408,368.00	1,414,558.14
Indiana.....	2,388,000.00	735,000.00	601,150.00	884,950.00	783,249.00	101,000.00	5,403,349.00	5,521,252.01
Massachusetts.....	2,388,000.00	735,000.00	601,150.00	884,950.00	783,249.00	101,000.00	5,493,349.00	5,521,754.90
Oregon.....	2,531,560.00	738,000.00	601,150.00	884,950.00	783,249.00	101,000.00	5,662,908.00	5,690,805.96
Cruiser No. 12.....	1,096,400.00	1,235,800.00	17,050.00	52,250.00	159,670.00	105,000.00	2,606,239.00	3,149,214.86
Torpedo boat No. 2.....	47,000.00	75,000.00			12,100.00	2,750.00	136,850.00	136,850.00
Cruiser No. 13.....	1,425,000.00	1,330,000.00	17,050.00	52,250.00	171,787.00	105,000.00	3,101,057.00	3,104,385.80
Puritan.....	448,503.00	7,500.00	306,850.00	249,150.00	445,359.00	64,000.00	1,582,051.00	1,774,823.82
Monahock.....	448,350.00	52,770.00	227,700.00	139,700.00	194,317.00	50,400.00	1,113,237.00	1,512,297.87
Amphitrite.....	267,999.00	7,667.00	227,700.00	139,700.00	194,317.00	50,400.00	887,783.00	1,218,023.16
Terror.....	290,260.00	4,380.00	208,450.00	152,350.00	190,810.50	50,400.00	896,659.50	1,402,266.24
Manitowish.....	17,362.00	3,000.00			50,747.00		71,110.00	849,016.89
Total.....	17,530,122.00	9,003,961.00	4,166,250.00	4,990,150.00	5,533,687.50	1,304,975.00	42,529,315.50	53,920,282.03

Practice cruiser	193,750.00					54,901.00	21,800.00	273,931.00	828,745.71
Tugboat No. 1	20,760.32						4,450.00	25,210.32	36,868.00
Tugboat No. 2	20,760.32						4,450.00	25,210.32	36,868.00
Tugboat No. 3	20,760.32						4,450.00	25,210.32	36,868.00
Total	62,280.96						13,350.00	75,630.96	110,664.00
Grand total	17,786,152.96					5,592,758.50	1,339,625.00	242,878,897.46	54,967,691.74

The above table includes not only the cost of hull, machinery, armor, and battery of the new ships, but everything in their permanent outfit or equipment, such as boats, furniture, cooperage, blocks, masts and spars, galleys, rigging, sails, awnings, guns, gun-carriages and their appurtenances, torpedo tubes, everything, in short, that can be considered as belonging to the general equipment of the ship. It does not include the perishable articles of outfit which are expended in use, such as stores, provisions, paints, oils, and ammunition. It also includes all expenditures under the head of designing, drafting, and other office work, model-making, compensation of weighers and other assistants to inspecting officers, which, although forming actually no part of the cost of the ship, have been distributed under the system of bookkeeping in the Department among the different vessels and included in the above table in order that every item of expenditure, however remotely connected with the actual cost of building, should be set forth in the fullest possible manner.

In examining the above statement it will be seen that the cost of building the new ships of the Navy, excluding tugs, from beginning to final completion, covering operations from the fiscal year 1883-'84 to 1894-'95, aggregates, during the twelve years, a total of \$69,993,382, or considerably less than \$6,000,000 a year. The vessels included in this statement are forty in number, with an aggregate tonnage of 155,820 tons.

When it is considered that at the time of beginning the first four cruisers not a single steel ship had been built in this country, that no vessels either of steel or of iron had been constructed by the Navy since the war, with the exception of three small third-class iron gun-boats built in 1874, and that the whole work upon these ships represented practically a new branch of manufacture, the stupendous character of the results accomplished may be appreciated. For the mechanical work actually done, the figures are reasonable; while the moral result, which has been to raise this country from a position of absolute defenselessness to that of a respectable naval power, has been out of all proportion to the annual charge upon the revenues. No other expenditure of the Government, of equal amount, during the period has been more productive of benefit than that which has been devoted to the construction of an American Navy, out of American materials, and by American labor.

ESTIMATES AND APPROPRIATIONS.

The general estimates for the support of the Navy, including public works and the Marine Corps, which were sent in last year, showed a reduction, as stated in the report of that year, of over \$1,000,000 below the estimates of the previous year.

The estimates for the same purpose herewith transmitted show a further reduction of \$241,053 below the estimates of last year, and a reduction of \$5,360.98 below the appropriations for the current year.

The present estimates for increase of the Navy show a very large reduction below the appropriations for the current year, the amount being \$12,280,855, against \$17,607,000 in the last appropriation, a reduction of \$5,326,145.

The total estimate for the Navy, including both running expenses and "increase of the Navy," is \$27,194,639.80, as against the appropriation of \$32,526,145.78 of last year, being an aggregate reduction in current estimates below the last year's appropriation of \$5,331,505.98.

The appropriations for the increase of the Navy since July, 1889, have been unusually large as compared with those of previous years. As was indicated, however, in the report of last year, the necessity for these appropriations has been due to the fact that the burden has fallen upon these years of carrying a part, and in some cases by far the largest part, of the construction of every vessel which has been authorized by Congress since 1884.

Comparative exhibit of estimates and appropriations, 1892 and 1893.

Detailed objects of expenditure and explanations.	Estimates, 1892.	Appropriations for 1892-93 (current year).	Estimates, 1893.	Total.
General establishment:				
Pay of the Navy	\$7,314,742.00	\$7,300,000.00	\$7,350,000.00	
Pay miscellaneous	240,000.00	240,000.00	240,000.00	
Contingent Navy	7,000.00	7,000.00	7,000.00	\$7,597,000.00
Bureau of Yards and Docks:				
Ordinary expenses	602,720.46	680,412.37	718,794.04	
Public works	523,375.13	709,137.95	469,659.38	1,188,453.42
Bureau of Navigation:				
Ordinary expenses	135,750.00	148,000.00	131,750.00	
Naval Academy	213,982.45	213,073.45	207,688.65	339,438.05
Bureau of Equipment	1,044,025.00	904,025.00		1,034,225.00
Bureau of Ordnance	480,041.25	389,824.00		594,041.25
Bureau of Construction	1,019,972.50	1,044,972.50		1,019,972.50
Bureau of Steam Engineering	789,105.00	712,900.00		763,105.00
Bureau of Provisions and Clothing ..	1,242,581.09	1,207,581.09		1,232,692.03
Bureau of Medicine and Surgery ..	140,500.00	125,000.00		125,000.00
Marine Corps:				
Pay department	707,726.76	696,296.28	696,625.00	
Quartermaster department	308,829.47	254,234.14	263,906.28	960,531.28
Naval Observatory	*294,487.20	136,689.00		59,325.67
Total running expenses	15,154,837.81	14,919,145.78		14,913,784.80
Increase Navy:				
Bureau Yards and Docks	200,000.00	100,000.00	110,000.00	
Bureau of Equipment	400,000.00		400,000.00	
Bureau of Ordnance	4,138,850.00	4,000,000.00	4,186,250.00	
Bureau of Construction and Repairs	8,855,433.00	13,107,000.00	7,384,605.00	
Bureau of Steam Engineering ..	4,850,946.00			
Total Increase Navy	18,471,229.00	17,607,000.00		12,280,855.00
Grand total	33,626,066.81	32,526,145.78		27,194,639.80

* Supplementary estimate.

Appropriations, expenditures, and balances, fiscal year ending June 30, 1891.

	Appropriations for fiscal year ending June 30, 1891.	Amount drawn fiscal year ending June 30, 1891.	Balances undrawn June 30, 1891.	Balances undrawn Oct. 31, 1891.
Pay of the Navy	\$7,250,000.00	\$6,175,210.00	\$1,074,790.00	\$734,062.38
Pay, miscellaneous	240,000.00	233,350.38	6,649.62	5,894.38
Contingent, Navy	7,000.00	3,456.89	3,543.11	923.85
Pay of the Marine Corps	687,471.79	591,268.19	96,203.60	75,473.79
Marine Corps:				
Provisions	69,137.72	64,713.89	4,423.83	3,782.49
Clothing	75,000.00	74,416.14	583.86	1,167.80
Fuel	20,000.00	19,958.35	41.65	1,647.62
Military stores	12,000.00	12,000.00		15.64
Transportation and recruiting	12,000.00	10,540.08	1,459.92	1,088.45
Repairs of barracks	18,850.00	18,849.12	.88	.88
Forage	3,500.00	3,434.23	65.77	65.77
Hire of quarters	6,624.00	6,623.20	.80	.80
Contingent	27,500.00	27,473.57	26.43	25.45
Naval Academy:				
Pay, Naval Academy	104,217.45	104,217.45		101.01
Special course	5,000.00	1,700.62	3,299.38	2,753.31
Repairs	21,000.00	16,795.98	4,204.02	1,355.09
Heating and lighting	17,000.00	14,781.18	2,218.82	154.70
Furniture for cadet quarters	6,500.00	4,859.00	1,641.00	1,145.59
Contingent	41,800.00	35,641.41	6,158.59	1,102.61
Navigation:				
Transportation and recruiting, Navy	30,000.00	25,680.35	4,319.65	345.29
Contingent	15,000.00	3,032.42	11,967.58	5,256.79
Gunnery exercises	6,000.00	4,115.36	1,884.64	509.28
Naval training station	14,000.00	9,829.67	4,170.33	1,562.35
Naval war college and torpedo school	10,000.00	97.85	9,902.15	9,610.82
Ordnance:				
Ordnance and ordnance stores	144,000.00	117,184.88	26,815.12	14,218.81
Repairs	15,000.00	11,893.06	3,106.94	1,042.10
Torpedo station	60,000.00	42,447.24	17,552.76	5,781.32
Civil establishment	26,624.00	25,370.10	1,253.90	1,303.21
Contingent	8,000.00	5,994.33	2,005.67	17.80
Equipment of vessels	910,000.00	676,062.27	233,937.73	28,793.61
Civil establishment, equipment	19,025.00	19,024.91	.09	.30
Contingent, equipment	10,000.00	6,521.14	3,478.86	462.11
Maintenance, yards and docks	230,000.00	201,881.02	28,118.68	5,454.85
Civil establishment, yards and docks	53,986.04	52,876.12	1,109.92	1,299.93
Contingent, yards and docks	20,000.00	17,394.38	2,605.62	737.30
Repairs and preservation at navy-yards	250,000.00	235,679.58	14,320.42	4,021.70
Naval Home, Philadelphia, Pa.	73,915.00	58,277.77	15,637.23	6,510.82
Medical department	60,000.00	52,281.33	7,718.67	6,280.53
Repairs, medicine and surgery	20,000.00	17,134.94	2,865.06	50.27
Contingent, medicine and surgery	25,000.00	20,766.72	4,233.28	1.49
Provisions, Navy	1,066,000.00	924,862.54	141,137.46	12,440.65
Civil establishment provisions and clothing	57,532.03	67,457.50	74.53	190.42
Contingent, provisions and clothing	40,000.00	37,165.65	2,834.35	890.28
Construction and Repair	1,000,000.00	934,061.51	65,938.49	21,284.24
Civil establishment, construction and repair	19,922.50	19,247.91	774.59	1,005.09
Steam machinery	650,000.00	570,794.30	79,205.70	36,066.47
Civil establishment, steam engineering	11,000.00	11,755.22	144.78	144.73
Contingent, steam engineering	1,000.00	756.30	243.70	26.02
Total	13,481,555.53	11,588,941.85	1,892,614.18	1,015,799.48

As will be seen from the foregoing exhibit—

The amount of appropriations for the current expenses of the fiscal year 1891, including \$43,500 for buildings and grounds, Naval Academy, was June 30, 1890.....\$13,525,055.53

The Treasury Department having decided that the appropriation for buildings and grounds, Naval Academy, was specific in character, by direction of said Department it was transferred on the 23d March, 1891, from appropriation 1891 to appropriation without year.....43,500.00

Making the amount of available appropriations for 1891.....13,481,555.53
Drawn by requisition to June 30, 1891.....11,588,941.35

Balance undrawn July 1, 1891.....1,892,614.18
Drawn by requisition from July 1 to October 31, 1891.....876,814.70

Balance undrawn November 1, 1891.....1,015,799.48
In hands of pay officers November 1, 1891.....1,419.11

Apparent available balance.....1,017,218.59

There is chargeable to this balance the following sums:

Due from pay of the Navy to officers and men	\$708,107.67
Due from pay of the Marine Corps to officers and men ...	21,730.40
Due from ordnance and ordnance stores for outstanding liabilities.....	12,000.00
Due from equipment of vessels for outstanding liabilities.	25,000.00
Due from construction and repair for outstanding liabilities.....	15,000.00
Due from steam machinery for outstanding liabilities....	30,000.00
Due from other appropriations for outstanding liabilities.	28,500.00
Due to clothing and small stores fund	50,407.18
	<hr/> 890,745.25

Available balance.....126,473.34

This balance may be decreased when all the accounts pertaining to the fiscal year have been finally adjusted.

SALE OF GOVERNMENT PROPERTY AND MISCELLANEOUS RECEIPTS.

From a statement prepared by the Fourth Auditor of the Treasury, a copy of which will be found in the appendix to this report, it appears that the deposits in the Treasury from November 1, 1890, to November 1, 1891, on account of sales of Government property, under the control of the Navy Department, amounted to \$235,016.97, of which the sum of \$149,310.78 was covered into the Treasury as miscellaneous receipts, and the remainder, \$85,706.19, credited various appropriations, in accordance with the provisions of section 3618 of the Revised Statutes and the acts of March 3, 1875, and June 20, 1878. The net sum realized from the sale of condemned vessels, \$78,137.36 during that period, is embraced in the Auditor's statement; also gains on bills of exchange, in-

terest, rents from public property and the values of work performed for, or articles supplied to, other departments of the Government, and receipts from all other sources than the sale of condemned materials.

Since the last annual report of the Department the following-named vessels, condemned as unfit for further service and stricken from the Navy Register in pursuance of the act of August 5, 1882, have been sold, after appraisement and advertisement, by sealed proposals, in accordance with the act of March 3, 1883, viz: the *Juniata*, *Brooklyn*, *Ossipee*, *Quinnebaug*, *Saugus* (monitor), tugs *Pilgrim* and *Rescue*, the wrecks of the tug *Triana* and steamer *Despatch*. The total sum received for these vessels was \$79,763, being \$26,463 in excess of their appraised value, from which the cost of advertising \$1,498.60 was paid. The net sum \$78,264.40 has been covered into the Treasury as miscellaneous receipts. A detailed statement of the sales and the disposition of the proceeds will be found in the appendix to the report.

The steamer *Tallapoosa* has been surveyed and condemned as unfit for further service, appraised, and ordered to be sold on the South Atlantic Station, as it was deemed unsafe to attempt to bring her to the United States. The *Speedwell*, which was stricken from the Register, was offered for sale, but no offer equal to her appraised value was received.

By the act approved July 2, 1890, the Department was authorized to sell, at a price to be determined by a board of appraisers, an area of 17.83 acres of the navy-yard and United States Naval Hospital lands in the city of Brooklyn, N. Y., provided the city should, within one year from the filing of the report of the board of appraisers, signify its desire to purchase the lands at the price fixed by the board.

On the 5th of September, 1890, Messrs. Andrew J. Perry, Joseph Benjamin, and Hassan H. Wheeler, all of Brooklyn, N. Y., were appointed a board to make the appraisal required by the act. Under date of November 24, 1890, this board filed its report, appraising the value of that portion of the lands designated as United States Naval Hospital lands, viz, 2.46 acres, at \$96,579, and the remaining 15.37 acres at \$603,421; a total of \$700,000.

The authorities of the city of Brooklyn, having decided to purchase the entire area at the price fixed by the board, deposited the sum of \$700,000 with the assistant treasurer of the United States at New York, N. Y., to the credit of the Treasurer of the United States, for the purposes of the act, and, under date of November 23, 1891, the sale was concluded and a deed conveying the lands to the city of Brooklyn was duly executed and delivered.

NAVAL OBSERVATORY.

The work on the new Naval Observatory has advanced so far that the transfer from the old to the new site will shortly be undertaken. The

failure of the contractors has delayed the work of the new building, now in its final stage, but the Government is amply protected, and arrangements are now making under the provisions of the contract by which its early completion may be assured.

When the transfer and installation of the instruments are completed, the Government will be in possession of one of the most admirably equipped observatories in the world. The question of the proper administration of this important charge, representing one of the most important branches of scientific investigation undertaken by the Government, is one that demands early attention. The system in existence hitherto, by which the selection of the Superintendent has been confined to line officers of the Navy, subject like other officers to changes of duty at comparatively short intervals, prevents that continuity of administration which is essential in carrying on the work of a great national observatory. No programme of scientific investigation, especially in the department of astronomy, can be carried out successfully by any institution, if liable to frequent interruptions by a change of its administrative head.

I therefore recommend the adoption of legislation which shall enable the President to appoint, at a sufficient salary, without restriction, from persons either within or outside of the naval service, the ablest and most accomplished astronomer who can be found for the position of Superintendent.

I would also recommend, in view of the era of progress and scientific development upon which the Observatory is now entering, that an advisory council be organized, composed of the Superintendent of the Observatory and its senior professor, and of three other persons of scientific attainments, whose duty it shall be to consider and report upon new instruments and their proper installation; to draw up, with such changes as may be necessary, from time to time the programme of scientific work, including observation, reduction, and publication, and to make such inspections and reports as may be desirable in regard to the character of the work done by the Observatory.

DRY-DOCK COMMISSION.

The commission, to which allusion was made in my last annual report, of which Capt. F. M. Bunce, U. S. N., was president, designated by an executive order of November 22, 1891, in pursuance of a clause in the Naval Appropriation Act of June 30, 1890, to select a suitable site, having due regard to commercial and naval interests, for a dry dock at some point on the shores of the Gulf of Mexico or the waters connected therewith, organized December 5, 1890, completed the duty required, and on the 9th of March last, made their report, which has been recently transmitted to you.

REVENUE MARINE SERVICE.

The Department again refers to its recommendation, made for two successive years, in favor of legislation consolidating the Revenue Marine Service with the Navy. The advantages of this change are so marked and have been so fully stated in previous reports of Secretaries of the Navy, that it is unnecessary to repeat them here. The measure is advantageous from every point of view, and is again earnestly commended to the attention of Congress.

B. F. TRACY,
Secretary of the Navy.

PAPERS

ACCOMPANYING

THE REPORT OF SECRETARY OF THE NAVY.

REPORT OF THE CHIEF OF THE BUREAU OF YARDS AND DOCKS.

BUREAU OF YARDS AND DOCKS,
NAVY DEPARTMENT,
Washington, D. C., October 14, 1891.

SIR: I have visited and inspected during the past year all of the navy-yards and stations, except that at Sacketts Harbor.

In 1883 a board, created by act of Congress August 5, 1882, of which Rear-Admiral Luce was president, found the then value of buildings, docks, and other improvements pertaining to this Bureau, exclusive of the value of the sites upon which they were situated, to be \$33,339,363.24. Since then three docks have been built at a cost of \$1,500,000, and other improvements made at a cost of about \$1,000,000, to be cared for by this Bureau.

There are 14 navy-yards and stations, exclusive of the Naval Home, covering 2,700 acres of ground, with 439 workshops, store and ship houses, 7.18 miles of wharf line, 10 dry docks, 19 marine railways and launching ways, a large number of offices, many miles of railway, of water, gas, and steam pipes, 150 horses and oxen, and 100 houses for officers' residences, to be maintained by this Bureau.

The deterioration upon an unoccupied building or dock is as great, or greater, than when occupied. If these yards and stations are never to be used for naval purposes, true economy would be to sell them. If, however, the Government is to hold on to them for an emergency, sound policy requires that they should be kept in repair. Another reason for increase of expenses of this Bureau is that many improvements incidental to modern ships and a new navy have been made, such as the three new timber dry docks at New York, Norfolk, and League Island; also the growing importance of Port Royal, Key West, and of New London for coaling stations. A dock is being constructed at the former. These make it necessary to have increased appropriations.

The stone dry dock at Mare Island, Cal., and the dock now being built at Port Royal, S. C., are the only ones that will admit the largest battle-ships at their maximum draft.

It is therefore recommended that docks of sufficient capacity be constructed at New York, Philadelphia, and Norfolk without delay.

The new Navy demands of this Bureau additional wharf room, more dry docks, better facilities for taking coal on board, and appliances for handling heavy armor and guns.

During the past year much has been done in rebuilding substantial wharves at New York, League Island, Mare Island, Norfolk, and New London.

Estimates will be submitted for coal pockets and facilities for handling coal. Contracts have been entered into for immense traveling cranes at New York and Norfolk. Appropriations will be asked for cranes at League Island and Mare Island.

A Simpson dry dock was opened at League Island in March. Work was begun in April on the dry dock at Port Royal. Congress has appropriated money to build a dry dock at Puget Sound, plans for which are being prepared, and proposals will be advertised for as soon as possession is obtained of the site and the exact location of the dock decided upon.

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NAVAL PRISONS.

There are two naval prisons, one at Mare Island, Cal., the other in Boston navy-yard.

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The capacity of the prison at Mare Island has been doubled, as well as other essential improvements made. The prisoners sent to the naval prisons are those convicted of offenses against discipline, not for criminal offenses.

They should not be maintained in idleness, but should be forced to learn a trade or do other work, so that when released they may become useful citizens.

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NAVAL HOME.

There were borne upon the rolls of the Naval Home, July 1, 1891, 231 beneficiaries, sailors, and marines, who have served their country faithfully.

This institution has been ably governed during the past year by Capts. Potter, Erben, and Commander Miller, and is now under the command of Commodore Stanton.

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NAVY-YARD, BROOKLYN, N. Y.

More vessels are fitted out at this navy-yard and more work done than at any other. It is very deficient in wharf room.

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NAVY-YARD, LEAGUE ISLAND, PA.

With the exception of the Washington navy-yard this is the only one situated on fresh water. On this account, its being easily defended, its central location, and its interior water communication with New York and the Chesapeake, destine it to be the most important naval station on the whole eastern coast.

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NAVY-YARD, WASHINGTON, D. C.

This is principally used for the manufacture of ordnance. That work, to be economically and rapidly done, requires that the breech-mechanism shop be remodeled, for which an estimate is made.

It is very necessary that there should be sufficient and proper storage and shipping facilities, for which an estimate is submitted.

The channel to the yard will be dredged as soon as the improvement to the Eastern Branch, under the direction of the War Department, is completed.

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NAVY-YARD, MARE ISLAND, CAL.

This being the only yard in working condition on the Pacific coast requires to be in first-class working order. I again earnestly recommend that an appropriation be made for an artesian well. At present the main supply of water comes from the Vallejo Water Company, which in dry seasons might not be able to stand the tax upon it. It is of vital importance at all times to have an abundant supply of fresh water. The cost of ferriage, the inconvenience to employes and others, render it in my judgment necessary to have a bridge to the mainland.

The sectional dry dock, if repaired, will lift vessels of about 2,500 tons, which is sufficient for the smaller cruising vessels. It has been in use since 1852, and if it is deemed inadvisable to repair this dock, steps should be taken to construct a new dock, for there is but one other at the yard, and in consequence there is much delay in fitting out ships.

NAVAL STATION, PUGET SOUND, WASH.

Plans are being prepared for a dry dock at this locality, and as soon as completed and the land acquired, will be advertised.

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INCREASE OF THE NAVY.

The entire amount asked for by the Bureau is \$3,529,976.17, the detail of which is contained in the tabulated sheets Nos. 1 to 6, recapitulated as follows:

Sheet No. 1. Bureau	\$12,430.00
Sheet No. 2. Maintenance and contingent	540,000.00
Sheet No. 3. Naval Home	77,295.00
Sheet No. 4. Repairs and preservation	500,000.00
Sheet No. 5. Improvements and increase of the navy	2,329,776.43
Sheet No. 6. Civil establishment	70,474.74
Total	3,529,976.17

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N. H. FARQUHAR,
Chief of Bureau.

HON. B. F. TRACY,
Secretary of the Navy.

REPORT OF THE CHIEF OF THE BUREAU OF EQUIPMENT.

NAVY DEPARTMENT, BUREAU OF EQUIPMENT,
Washington, October 15, 1891.

SIR: I have the honor to submit the annual report of the operations of the Bureau of Equipment, together with the estimates for the fiscal year ending June 30, 1893, the annual reports of the Superintendent of the Naval Observatory and of the Superintendent of the Nautical Almanac, the latter two reports accompanied by estimates, respectively, for the support of the Naval Observatory and the Nautical Almanac Office, and the reports of the Naval Inspector of Electric Lighting and the Superintendent of Compasses.

During the past fiscal year fifty-three vessels have been either wholly or partly equipped under this Bureau at an expenditure of labor and material of \$664,239.01.

Coal for ships' use and for the equipment shops at shore stations to the amount of 62,564 tons was purchased at a cost of \$465,584.46.

Hemp for the manufacture of cordage to the amount of 226 $\frac{287}{340}$ tons was purchased at a cost of \$48,959.02.

The ropewalk at the Boston navy-yard has supplied, as usual, the wants of the service.

The equipment shops at the same yard have been employed in making anchors, chain cables, sails, rigging, etc., to meet the wants of the service.

Very respectfully,

GEORGE DEWEY,
Chief of Bureau.

The SECRETARY OF THE NAVY,
Washington, D. C.

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REPORT OF THE CHIEF OF THE BUREAU OF NAVIGATION.

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The records of the Academy show that the percentage of successful mental examinations of candidates was highest between the ages of 14 and 17.

During the fiscal year ending June 30, 1891, 4,640 men and 694 apprentices were enlisted in the Navy. Of this number 2,022 men were enlisted or reënlisted on board of cruising ships; 2,618 men and the 694 apprentices were enlisted on board of receiving ships in ports where we have naval stations.

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One thousand and forty men and 1,113 boys, candidates for enlistment on board of the receiving ships, were rejected for physical disqualifications. Three thousand six hundred and thirty-one men and 330 apprentices were discharged. One hundred and thirty-one men and 3 apprentices deserted in foreign ports, and 938 men and 316 apprentices in home ports.

The number of men serving under continuous-service certificates at the end of the year was 1,397.

As an incentive to faithful and continuous service on the part of enlisted men, the Bureau recently issued an order directing that the crews of the receiving and stationary ships shall in future be composed, as far as practicable, of persons who have served twenty years as enlisted men in the general service, and that preference shall be given to those who have served under continuous-service certificates.

Already a number of applications under this order have been received, the first being from a meritorious and faithful petty officer with thirty-two years of continuous service.

It is believed that as soon as it is understood that faithful service on the part of the enlisted men is to be rewarded by duty near their homes and families, the better class of men will remain in the service. A great advantage will be gained also by having on all the receiving ships crews of highly trained men, whose knowledge and example will be of great assistance in training recruits.

Heretofore the greater part of the crews of receiving ships has been composed of persons who are not willing to undergo the hardships of sea service.

The following is a careful estimate of the number of enlisted men and apprentices required to man the ships of the Navy:

For the new ships already completed.....	3,256
For ships ordered and under construction	5,920
For receiving and stationary ships, Naval Academy, etc	902
For practice and training ships	485
For the Coast Survey.....	325
For the Fish Commission	124
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	11,012
For wood and iron ships still available.....	2,734
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Total.....	13,746

Under the system of enlistments for three years a portion of the force allowed is not available for manning the fleet; it is therefore recommended that the number of men of all ratings allowed for the Navy, including apprentices and boys, be increased to 10,000 and that the term of enlistment for general service be extended by law to four years.

The recommendation made in the last annual report, that men who have honorably served in the United States Navy should be granted, by statute, similar privileges as to citizenship to those provided for the Army, in section 2166 of the Revised Statutes, is renewed.

There being no longer any of the old ships available for use as barracks at the training station at Newport, there are now no facilities at the station for berthing the apprentices except a small building which was intended as a drill room and gymnasium, and is quite unsuitable for a dormitory; while the mess room and kitchen are inconveniently placed nearly a quarter of a mile distant, and are inadequate in point of space and conveniences.

For the success of the training system the time has arrived when it is absolutely necessary that barracks should be built for the apprentices, to contain in one building or group of buildings mess and formation hall, dormitories, wash and drying rooms, and other necessary offices.

The nature of the duties pertaining to this Bureau, including, as they do, supervision of the various schools for the instruction of officers and men and the control and records of the entire personnel of the

Navy, makes it necessary to employ naval officers, with their professional knowledge and experience, in charge of the various divisions.

For the same reason it is most important that the person who is to act in the absence of the Chief of Bureau should be an officer of the line of the Navy. It is therefore again recommended that the detail of an assistant to the Bureau be authorized by law.

The amount of labor devolving upon the Bureau in the matter of records, and the constant call upon it for information by other departments, renders an increase in the clerical force imperatively necessary in order to keep up the current work.

Very respectfully,

F. M. RAMSAY,
Chief of Bureau.

The SECRETARY OF THE NAVY.

REPORT OF THE SUPERINTENDENT OF THE NAVAL ACADEMY.

U. S. NAVAL ACADEMY,
Annapolis, Md., October 3, 1891.

SIR: I have the honor to submit a report of the operations of the U. S. Naval Academy during the past academic year.

The following statement shows the numbers of the several classes at the commencement of the academic year beginning October 1, 1891:

First class (line division, 36; engineer division, 6)	42	Third class	63
Second class	54	Fourth class	84

At the annual examination in June, 1891, 40 naval cadets of the line division and 7 of the engineer division completed the four years' course and received certificates of proficiency. Of these 3 of the line division applied for and received honorable discharges; the others were detached from the Academy and ordered into active sea service.

At the same examination 30 members of the class appointed in 1885 successfully passed the final graduating examination and were subsequently assigned as follows:

To the line of the Navy	18
To the Engineer Corps	5
To the Marine Corps	6

The course of instruction as approved by the Department and the prescribed routine of drills and exercises have been adhered to.

R. L. PHYTHIAN,
Captain, U. S. Navy, Superintendent.

The CHIEF OF BUREAU OF NAVIGATION,
Navy Department, Washington, D. C.

REPORT OF THE CHIEF OF THE BUREAU OF ORDNANCE.

BREECH-LOADING RIFLES.

The general system of manufacture and construction has been adhered to, but the increasing length of guns demanded by progress in powders and otherwise has required modifications in the design, especially of the larger calibers, in the direction of stiffening against longitudinal flexure and an increase of strength generally along the chase.

The number of guns required to arm the new vessels provided for by law, the number of sets of forgings thus far ordered, the number which have been delivered, and the number of guns completed to date are stated in the following table:

Caliber.	No. of guns required to arm vessels provided for by law.	No. of sets of forgings ordered.	No. of sets of forgings delivered.	No. of guns completed.
4-inch.....	69	35	35	7
5-inch.....	56	29	29	3
6-inch.....	129	134	134	117
8-inch.....	51	51	21	19
10-inch.....	22	25	14	8
12-inch.....	6	8	4	1
13-inch.....	12	12	0	0
Total.....	347	294	237	155

Of these guns all calibers up to and including the 10-inch have passed beyond the experimental stage, having been thoroughly tested on board ship and on the firing ground.

Although no guns of 16-inch caliber are at present required for the armaments of ships provided for by law, it is not unlikely that the time may come when it will be desirable to construct guns of the largest practicable caliber. The Washington gun factory is equipped for the manufacture of such guns, and the Bureau recommends that the construction of at least one 16-inch gun and mount be authorized. A design of this caliber has been made and it is believed that the difficulties experienced abroad with the guns of the larger bores may be overcome without serious trouble.

Forgings for the tube and jacket of the first of the 13-inch guns intended for the armament of the battle ships have been completed and will shortly be delivered by the contractors, and this caliber will then be rapidly pushed to completion and placed on the firing ground for test and the development of a suitable powder. The delay in the delivery of the material for this purpose has been due to the lack of tempering facilities for the length required.

The first 12-inch gun of 35 calibers length of bore has been completed and sent with its mount to the naval proving ground at Indian Head, Maryland, for proof and the development of a suitable powder. Three more guns of this caliber are in course of construction and are nearly completed.

Of the 10-inch caliber, the third and fourth of the main battery of the *Miantonomoh*, with their mounts, have been completed, tested, and supplied to that vessel. The four 10-inch guns required for the *Terror*

have also been completed and the two for the *Monterey* are rapidly approaching completion.

A device for operating the breech mechanism of heavy guns by hand, referred to in the last report, has been applied to the 10-inch caliber and has worked very satisfactorily on the proving ground. A similar design will be applied to the 12-inch gun.

Of the 8-inch guns finished since the last report only two have been issued to the service—those of the U. S. S. *Charleston*—the rest await the completion of the vessels upon which they are to be installed.

The Bureau has contracted for two sets of forgings for 8-inch guns of 40 calibers in length, which are to form part of the main batteries of Cruisers Nos. 12 and 13. The first set of these forgings will be delivered in the near future and work thereon will be immediately commenced and rapidly pushed to completion. It will be noted, in addition to the other remarkable qualities of these vessels, that their batteries are exceptionally powerful, and that they will thus be able to operate in bombardment at ranges sufficiently great to insure their own protection.

An 8-inch gun of 30 calibers, the jacket of which was furnished by Messrs. Whitworth & Co., of England, and the remainder of the forgings purchased in this country, has been completed and is now ready for issue to the service.

The 6-inch gun of 40 calibers length of bore has been manufactured and tested at Indian Head, Maryland. Its performance was satisfactory, a velocity of 2,180 foot seconds with a pressure of 15 tons having been obtained, using service brown powder. It is intended to supply these guns to Cruisers 7, 8, 12, and 13.

The Bureau expects within the coming year to change certain features of its breech mechanism and mount after the rapid-fire system. It is confidently hoped that largely increased effectiveness will be obtained.

The manufacture of 6-inch guns of 35 calibers has been proceeded with to the completely successful experimental development of the piece. The first specimen of this type was used in the late armor trials of September, 1890, where foreign plates were tested with results which are well known.

A 6-inch gun of this type has been furnished the Bethlehem Iron Company for use in comparative tests of armor. Cruisers Nos. 9, 10, and 11 will be armed with 6-inch guns of this length of bore.

The development of the rapid-fire guns of 4-inch and 5-inch calibers has been somewhat delayed by lack of cartridge cases.

One 5-inch rapid-fire gun is completed and with its mount is awaiting trial, which will take place as soon as its cartridge cases are obtained. Meanwhile all the other 5-inch guns for which forgings have been ordered have been assembled and can be finished in a very short time after the final dimensions of the chamber are fixed upon.

A small lot of 4-inch cartridge cases having been delivered by the Winchester Repeating Arms Company, the Bureau has been enabled to test the 4-inch rapid-fire gun and has had most satisfactory results. The gun tried was fitted with the slotted screw breech mechanism operated by a device of Ensign R. B. Dashiell for rapid opening and closing and the ejection of the fixed cases. Salvos of five rounds each were tried for rapidity of fire, the first five rounds taking 26 seconds, the second five rounds 22 seconds, and the third five rounds 17 seconds. It will be understood, however, that these rounds were fired with the gun in a fixed position, as with powder furnishing smoke it would be impracticable to aim with any such rapidity.

The gun, breech mechanism, mount, and cartridge cases all operated in a most satisfactory manner, and the Bureau, believing that this caliber may be considered as having passed the experimental stage, will at once proceed to the rapid completion of as many of these guns as are needed for ships in construction.

The prospects for smokeless powder for these calibers are extremely favorable, and it is anticipated, before this report is in print, that the conditions of this feature of the outfit will have been successfully settled.

In contracting for a number of 6-pounder rapid-fire guns the Bureau has caused their length to be increased five calibers with a view to augment their effectiveness and also to render them more suitable to the use of the smokeless powder, which will doubtless soon be exclusively used in all rapid-fire guns.

The five 6-pounder field pieces for which forgings were ordered, as mentioned in the last report, have been completed.

Twenty-five more of the high-power 1-pounder guns referred to in the last report have been ordered, making forty of these guns, while there are but fifteen of the old-fashioned 1-pounders in service, the Bureau has determined to increase the powder charge of these guns with a view to at once realizing their full power.

In this connection, the Bureau desires to recommend that the caliber and weights of all projectiles used in the Army and the Naval service be made uniform in order that in case of war an interchange of ammunition may be made without confusion or difficulty.

The subject of artillery construction has remained under the principal charge of Prof. P. R. Alger, whose eminent services in this line have been noted in previous reports of this Bureau since the commencement of the new constructions.

Ensign I. K. Seymour has also been employed upon this branch of ordnance work during the year, and the Bureau desires to commend his industry and ability.

POWDER.

The manufacture of brown powder for the Navy has continued by Messrs. E. I. Du Pont & Co., of Wilmington, Del.

Brown powder for the 6-inch and 8-inch guns is now produced with uniform success in advance of the demand for it for the new ships. The requirement for this powder is 2,000 foot seconds in the 30-caliber guns, 2,100 foot seconds in the 35-caliber guns, and 2,175 foot seconds in the 40-caliber guns, the chamber pressure in no case to exceed 15 tons per square inch.

Samples of 12-inch powder have been ordered and will immediately be tested at Indian Head. No special difficulties are anticipated in the development of a suitable brown powder for this caliber.

A satisfactory brown powder has been obtained for the 10-inch guns of the *Miantonomoh* and has been supplied to that vessel.

Numerous other samples of 10-inch brown powder have been tested with fair results, and it is believed that there will be no difficulty in supplying powder for this caliber as fast as required.

Messrs. Lafin and Rand have presented three samples of prismatic powder for trial in the 6- and 8-inch guns, but although showing an improvement on that heretofore tested they failed to meet the requirements of the Bureau.

The same grain as is used in the 6-inch guns is found to give good results in the 4-inch guns, and pending the development and adoption of smokeless powder will be used in this caliber. In the 5-inch rapid-

fire gun, a velocity of 2,280 foot seconds has been obtained with a pressure of 13.6 tons, using this same powder, and even better results are anticipated with a smaller grain, which has been ordered and will soon be supplied.

A new square-grained powder for use in the smaller caliber of rapid-fire guns has been tried with promising results; the grains are of black powder coated with brown.

STOWAGE OF AMMUNITION.

The subject of the stowage of ammunition on board ship has many important bearings, as it is necessary that the explosives shall remain unchanged in considerable variations of temperature and hygrometric conditions, during long periods of time. Facility of access for distribution to the battery and convenience of stowage for the greatly increased amounts issued for modern artillery are problems the solution of which, under the cramped conditions existing afloat present grave difficulties. It is only after prolonged experience that these can be considered as satisfactorily solved.

The Bureau desires to note in this connection the valuable study and services of Lieut. C. J. Boush, who has charge of this matter.

SMOKELESS POWDER.

During the year the Bureau has made numerous experiments with a smokeless powder invented by Prof. C. E. Munroe of the Naval Torpedo Station and developed and manufactured at that station under the direction of Commander T. F. Jewell, inspector of ordnance in charge.

Beginning with the small arm and continuing by progressive experiments through the 1, 3, and 6 pounder guns up to the 4-inch rapid-fire gun, promising results have been obtained in all cases. With charges about one-half those used with ordinary powders, the velocities were increased from 150 to 200 foot seconds with no increase of chamber pressure.

This powder contains no unstable or volatile constituents, is unaffected by repeated heating for long periods, and is uninjured even by boiling in water, though while wet it will not burn. It can not be detonated, either by the direct action of fulminate when closely confined, or by influence, and, in fact, will successfully undergo tests of unusual severity.

The results obtained at the Naval Torpedo Station have been checked by experiments at other points and with independent apparatus.

The following are some of the firing results:

One hundred rounds were fired from a small arm of caliber .315, using a steel-coated bullet of 216 grains and a charge of 42 grains of smokeless powder. The mean muzzle velocity, measured in 50 of these rounds, was 2,260 foot seconds and the mean chamber pressure measured in the other 50 rounds, was 14 tons. The variations from the mean in velocity were very small and the variations in the observed pressures, while greater, were not more than should be expected with the small arm pressure gauge. In the 3-pounder rapid-fire gun a velocity of 2,250 foot seconds was given by a charge of 310 grains with a chamber pressure of 14.8 tons, and in the 6-pounder, a charge of 418 grains gave a velocity of 2,040 foot seconds with 14.5 tons pressure.

It is believed that within a very short time the use of gunpowder

will be entirely abandoned, in calibers of 6-inch and below it, being replaced by some one of the numerous forms of so called smokeless powders, and the Bureau feels gratified with the progress made in this direction.

HIGH EXPLOSIVES.

During the year experiments with high explosives have been continued, chiefly with gun cotton and emmensite.

Gun cotton is undoubtedly the best known explosive for naval uses. It is safer in manufacture, handling, and transportation, even than gun powder; it is quite insensitive to shock, will not explode by ignition, is effective at very low temperatures, and wet, as well as dry, and does not deteriorate when stored for long periods. The growing needs of the service for this explosive, its probable use in large quantities in the manufacture of smokeless powders, and the certain demand for its production in war time at a rate far beyond that possible with existing facilities induced the Department to consider their extension. To this end an offer of an order for 50,000 pounds of gun cotton was made to Messrs. E. I. Du Pont & Co., of Wilmington, Del., contingent upon establishing a complete plant for its production. This offer having been accepted, the Department has placed at the disposal of this company all its knowledge and experience gained in the manufacture of gun cotton at the Naval Torpedo Station, and within two months their plant will be in working order, capable of turning out 1,000 pounds of gun cotton per day of twenty-four hours, and with facilities for rapid extension, if this at anytime be found desirable. Besides this the capacity of the gun-cotton factory at the Torpedo Station, Newport, R. I., at present the only source of supply in the country, has, during the year, been nearly doubled by the addition of an enlarged drying room and another set of cooling troughs.

Experiments have continued with shell loaded with gun cotton and fired from powder guns with uniform success, but the necessity of using a fulminate fuse for detonating these shell has caused the Bureau to seek an explosive which, while as powerful as gun cotton, can be detonated by a fuse of less sensitive composition than fulminate of mercury. As mentioned in the last report, emmensite seemed to promise to fulfill the desired conditions, and during the year experiments made at the torpedo station have resulted in the production of a fuse mixture, which, while insensitive to shock and percussion, will, when simply ignited, explode emmensite with a high degree of certainty and with an effect approaching detonation.

Experiments at the naval ordnance proving ground, at Annapolis, Md., with a fuse composition suggested by the Bureau have been equally successful. Emmensite, when strongly confined, was exploded with effect equal to those of detonated gun cotton by the simple ignition of this composition in its midst. For example, an 8-inch forged steel armor-piercing shell containing 3 pounds and 3 ounces of emmensite: exploded in this manner, was completely shattered, 322 fragments being recovered.

The tests as to the keeping qualities of emmensite, which have been going on since June, 1890, have thus far shown no apparent change.

An experimental 11-inch mortar designed for firing high explosives has been manufactured from a 11-inch smooth-bore gun and installed for trial at the naval proving ground, Indian Head, Md. A number of projectiles have been made for this mortar each capable of holding about 100 pounds of emmensite or some other high explosives

and fitted with fuses of a detonating mixture devised at the torpedo station. These will be propelled by a charge of powder with sufficient air space in the chamber to give a maximum pressure of about 8 tons per square inch, and a muzzle velocity of about 1,000 f.s. to the shell.

It is hoped thereby to demonstrate the feasibility of throwing large quantities of high explosives from powder guns safely and of detonating them on impact.

It is the Bureau's intention to recommend the adoption of a relatively short gun of large caliber, using powder as the propulsive charge and firing a projectile containing a charge of emmentite or gun cotton, for a feature of the armament of vessels with a view of utilizing either an aerial or submarine torpedo effect at ranges where the question of accuracy of fire is absolutely eliminated.

The report of Commander T. F. Jewell, in charge of the torpedo station, appended hereto, will be found to contain these and other experiments and researches described in greater detail.

ARMOR-PIERCING PROJECTILES.

No further orders for armor-piercing shell have been given, except one for one hundred 4-inch caliber for experimental purposes.

The deliveries under the contract with the Carpenter Steel Company, of Reading, Pa., have not yet been completed. All the 6-inch and about one-half the 8-inch shell under that contract have, however, passed the required tests and these calibers are now issued to ships as required.

A number of the 4-inch shell ordered from this company have also been used in experimental work with good results.

Besides this, a test has been made of 6-inch armor-piercing shell presented by the Sterling Steel Company and by the Redemann-Tilford Company, both with poor results. In the smaller calibers, tests made of 6-pounder armor-piercing shell made by electro-welding have shown promising results.

A definite progress in improvements in the quality of the projectiles received under the contract with the Carpenter Steel Company has been distinctly apparent since the commencement of deliveries, and it is gratifying to be able to note that this is due to the suggestions of the contractors themselves, who have in a measure abandoned the formula furnished by the foreign firm from which the Firminy methods were originally purchased.

No opportunity has occurred since the last report to make a positive comparison with Holtzer projectiles, which are considered as standard in Europe. It is probable, however, that the Carpenter projectiles nearly approach the Holtzer in quality.

COMMON SHELL.

The production of cast-iron common shell and shrapnel has continued at the Washington navy-yard as these projectiles have been required for ships and the proving grounds.

In the last report it was mentioned that the Bureau hoped to establish in the United States a new process of manufacturing forged steel common shell. Since then the Department has contracted with the United States Projectile Company, of Brooklyn, N. Y., for 15,200 shells and 3,000 shrapnel cases of 4, 5, and 6 inches calibers, all to be of forged steel made by the process referred to, the right to use which had been acquired by this firm.

The Bureau has besides this given an order to the American Projectile Company, of Boston, Mass., for 5,000 4-inch and 10,000 6-pounder shell, all to be made of steel tubing electro-welded to drop forged heads by a process owned by that company.

The production of steel common shell, which possesses considerable advantages over cast-iron ones, is now assured, for the smaller calibers at least, at a reasonable price and in quantities as great as desired.

For the larger calibers it is probable that cast-steel common shell will be used to a considerable extent.

The Bureau expects to domesticate in this country the methods employed by Messrs. R. A. Hadfield & Co., of Sheffield, England, which have been employed so successfully in the production of cast-steel shell. Negotiations looking to the acquisition of these by an American firm are now in progress.

The cost of cast-iron projectiles made at the Washington Gun Factory has been greatly reduced within the past year.

MACHINE GUNS AND SMALL ARMS.

During the year the progress of rearming with the reduced caliber small arm in European countries has been closely observed. Smokeless powders, suitable for use in the new rifles, have been improved to a point where they give fairly satisfactory results in the field, and a general adoption of the reduced caliber seems now assured.

The Bureau's experiments with the Naval Torpedo Station smokeless powder give assurance that there should be no further delay in arming the Navy with a rifle of the most approved type now produced, and its action in the matter is only prevented by the necessity of awaiting the determination by the Ordnance Department of the Army of the dimensions of cartridge to be adopted for use by that branch of the service. It is considered advantageous that the small-arm ammunition of the Army and Navy be interchangeable, and a speedy settlement of the question of its dimensions is most desirable.

The Gatling gun has of late been greatly improved by the adoption of a positive feed, by means of which the cartridges are fed directly from the packing cases without the necessity of filling feed cases in the field. The Bureau has arranged for the acquisition of one of these improved Gatlings, which as yet are only manufactured by an English firm, and will give it a thorough trial.

A further improvement has been suggested in the use of an electric motor for operating the Gatling gun in place of hand power, when mounted on board ship, by which it is hoped to simplify the application.

In view of the reports which have been received from service the Bureau is not entirely satisfied with the efficiency of the double action system, which forms a feature of the naval revolver. The principle of self-cocking has apparently advantageous elements, but it is considered that the liability to accident is greatly enhanced thereby, and for this reason it proposes, in the purchase of future supplies of this arm to eliminate the double action. In this the practice abroad is adhered to.

TORPEDO BOARD.

The general subject of torpedo outfits, extending over a very large field and comprising torpedoes, torpedo cruisers and boats, submarine vessels and guns, and torpedo defense nets, has assumed so much im-

portance that the Bureau has considered it desirable to appoint a board of officers which shall be specially charged, under the Bureau of Ordnance, with all details concerning this feature of the armament. Commander G. A. Converse, whose extensive experience and well-known attainments in this direction render him peculiarly fitted, has been appointed president of the Board, and has associated with him as members Lieut. C. A. Bradbury, an attaché of the Bureau of Ordnance, and the inspectors of ordnance in charge of the manufacture of auto-mobile torpedoes at Providence, R. I., and Brooklyn, N. Y., Lieuts. F. J. Drake and T. C. McLean, respectively.

The questions regarding the installation, stowage, distribution, etc., are being rapidly settled by this Board, following the most approved European practice, and it may be expected that with the manufacture and delivery of torpedo supplies the Bureau will find itself in possession of the necessary technical data and apparatus for their successful operation as a part of the regular outfit.

AUTO-MOBILE TORPEDOES.

The Bureau has fully realized the necessity of supplying the new vessels with torpedoes of the most efficient type, and has been unremitting in its efforts to accomplish this result without unnecessary loss of time. The delay of the Hotchkiss Ordnance Company, with which a contract for the Howell torpedo was made January 5, 1889, to produce a trial torpedo within the specified time, and the fact that the Hall torpedo, for which a special appropriation was made June 30, 1890, was as yet experimental and undeveloped, led the Department to enter into negotiations with the proprietors of the most successful torpedo built abroad, viz, the Whitehead torpedo, with a view of domesticating its manufacture. The result of these negotiations was most satisfactory, and an experienced and well-established firm in Brooklyn has acquired the right to manufacture the weapon in this country.

In all torpedoes in which air is used as the motive power the flask or air vessel forms a most important feature, the requirements being great strength, extreme lightness, and the absence of porosity. Knowing the difficulties which had been experienced abroad in procuring a suitable air vessel, and which had only been overcome after repeated failures, the Bureau has taken the matter in hand, and at present trial air vessels are being made of steel by the Bethlehem Iron Company and by the Carpenter Steel Company; of aluminum bronze by the Aluminum Brass and Bronze Company, of Bridgeport, Conn.; and of manganese bronze by B. H. Cramp & Co., of Philadelphia, Pa. From experiments already made, the Bureau has every reason to expect that it will soon be able to obtain air vessels which will equal the best products abroad.

THE HOWELL TORPEDO.

Owing to the loss of several torpedoes during the preliminary trials and to difficulties encountered in the development of the weapon, the Department has granted an extension of the contract time for delivery to November 30, 1891.

The experience gained in former trials has led to the remodeling of the torpedo in many respects, and the new type is much superior to the old. Experiments now in progress give assurance that the torpedo will soon be ready for its official trials.

THE HALL TORPEDO.

This torpedo is being made at the naval torpedo station, Newport, R. I. The working drawings have received the approval of the Bureau, and all parts of the initial torpedo are now completed and ready for assembling, except the air vessel. The completion of the torpedo after the flask is received will be a matter of a few weeks' work.

THE WHITEHEAD TORPEDO.

The E. W. Bliss Company, of Brooklyn, N. Y., having acquired the patents, working drawings, and models of the Whitehead torpedo and launching apparatus, and having prepared a suitable plant for their manufacture in this country, the Department entered into a contract with them on the 19th of May last for 100 18-inch torpedoes of the most recent type. Under the contract the first torpedo is to be ready for trial November 30 next, and, if found satisfactory, the remainder are to be delivered at the rate of ten per month. From progress already made, there is reason to believe that there will be little or no delay in having the trial torpedo ready at the appointed time.

LAUNCHING TUBES.

The launching tubes for the Howell torpedo have been developed, and ten of them, the number called for under the contract with the Hotchkiss Ordnance Company, have been practically completed. By the terms of the contract no launching gear can be accepted until one torpedo and its tube have fulfilled all the conditions of the specifications. Should the torpedo now undergoing trial be successful, these tubes will be at once installed on vessels now in commission.

Working drawings of launching tubes for the 18-inch Whitehead torpedo, for both powder and air impulse, have been prepared, and the Bureau is about to place an order for enough of the various kinds to meet the present needs of the service.

The present state of work, in connection with auto-mobile torpedoes and their accessories, is such as to justify the belief that the installation of outfits on board vessels will commence early in the coming year, and that our Navy will soon be equipped with torpedo outfits equal, if not superior, to those possessed by foreign nations.

DIRIGIBLE TORPÉDOES.

The Patrick torpedo.—Of the three torpedoes of this type ordered from Mr. J. N. H. Patrick, in February, 1889, one was delivered last year, and the remaining two were submitted for final test on the 5th of October.

These torpedoes are now at the torpedo station at Newport, and it is the intention to so distribute them that they would be useful in emergencies and will also be available for instructional purposes.

The Sims-Edison torpedo.—The Bureau believes that it would be advantageous to the Navy were it to acquire a torpedo of this type for experimental and educational purposes. Correspondence has been opened with the company controlling its manufacture, but the price asked is in excess of the funds at the disposal of the Bureau.

SUBMARINE GUN.

The Department, under the authorization of the act of Congress of June 30, 1890, entered into a contract, under date of September 19, 1890, with the Ericsson Coast Defense Company for one 16-inch submarine gun and six steel projectiles to be placed in position on board the *Destroyer* for a thorough test of the system.

The work under this contract having been greatly delayed by the failure of subcontractors to complete the gun, the Bureau has undertaken this work and is now finishing the rear section of the piece at the Washington gun factory. The expense of this work, which will have been completed by the end of October, will be borne by the contractors.

The experimental tests will be conducted by a board of naval officers appointed by the Department, and in case they are successful the Department has an option to purchase the right to use the system at a price fixed by the contract. In case of an unsuccessful test, the gun and projectiles are to be turned over to the Department for such use as it thinks best.

A further consideration of the subject of submarine artillery, which has been rendered possible by the approaching completion of the experimental type gun, inclines the Bureau to the belief that it will prove a valuable and important adjunct to our defensive armament, particularly when mounted on board of vessels intended especially for ramming. It seems probable that the chances of the ram being able to reach her antagonist with destructive effect will be quadrupled by the addition of this weapon to her means of offense.

TORPEDO DEFENSE NETS.

A section of a torpedo defense net has been made by the Midgley Wire Belt Company, of Beaver Falls, Pa., which in point of weight, flexibility, and convenience of stowage compares favorably with other types of nets used abroad.

A similar section of net of the most approved foreign type has been procured, and it is the intention of the Bureau to test the relative merits of the two nets under service conditions as soon as the Ericsson submarine gun is available. The result of these experiments is awaited with great interest.

Negotiations with a view to acquire the patent rights of the Bullivant net are now pending between that firm and an American firm of good reputation.

TORPEDO BOATS.

The *Stiletto* has recently had a new boiler put in, and is now in good, serviceable condition. A launching tube of the Hotchkiss type is now mounted on deck for the trial of the Howell torpedo, and plans for fitting a tube in the bow have been prepared. When this is done, the boat will be a good second-class torpedo boat, and will be most useful in conducting trials and drilling crews in the use of the Howell torpedo.

The Cushing.—Plans have been prepared for mounting one tube in the bow of this boat, and two tubes on a turntable on deck. As the relative merits of parallel and diverging fire are yet to be determined, it is proposed that the two deck tubes shall be adjustable.

The desirability of having boats fully prepared and equipped for experimental work during the final development of the torpedo outfits is apparent.

The specifications under which the torpedoes are being constructed require that the course of the torpedo shall be accurate within certain prescribed limits, "when fired in any direction from a vessel going at a speed of 18 knots or less."

It is also the intention to use these boats for the purpose of determining certain data required for the preparation of a book of instructions and drill to be supplied to the general service.

SUBMARINE BOATS.

The Bureau has carefully noted the progress which has been made in the different countries in the construction of the submarine boats. One recently used during torpedo maneuvers in France is said to have been most successful. The recent progress and development in storage batteries and electric motors encourage the belief that electricity can be utilized for submarine navigation, thus greatly simplifying the problem. The Bureau desires to suggest the advisability, in the near future, of inviting plans and proposals for building a submarine boat which would be adapted to naval purposes.

ARMOR CONTRACTS.

The plant for the manufacture of armor to be established by the Bethlehem Iron Company, of South Bethlehem, Pa., under their contract of June 1, 1887, with the Navy Department has been completed during the year and all parts are now in operation.

Certain small lots of armor for the *Maine* and *Texas* have been manufactured under this contract, and the armor of the *Maine* and *Terror* are in course of manufacture.

The Bureau has, with authority of the Department, entered into negotiations looking to the furnishing by the Bethlehem Iron Company of nickel steel instead of simple steel armor for the *Amphitrite*, *Monadnock*, *Puritan*, *Maine*, and *Texas*, all of which are to be supplied with armor under their contract.

The barbette armor of the *Monterey*, for which a special order was given to the Bethlehem Iron Company, has been manufactured and a selected plate will shortly be submitted to the ballistic tests required before acceptance of the lot of armor it represents.

For the past four years, since the beginning of the establishment of the plant for the manufacture of gun steel and armor, Lieutenant Kosuth Niles, U. S. N., has been the Bureau's inspector at the Bethlehem Iron Works. He has also been the Bureau's inspector of the armor-piercing shell manufactured by the Carpenter Steel Company at Reading, Pa.

The zeal and intelligence displayed by Lieutenant Niles in the important position which he has held merits special commendation, and the Department has greatly profited by his careful attention and thorough knowledge of all the details of the operation coming under his supervision.

On November 20, 1890, the Department entered into a contract with Carnegie, Phipps & Co., for 6,000 tons of armor plates and appurtenances, deliveries to begin on July 1, 1891, and to be completed in one year from that date.

Under this contract the company are bound to furnish and maintain the most improved modern plant for the production of first-class armor and to conduct it according to the best methods. The armor bolts,

etc., to be supplied are to be ordered from time to time, as needed, the prices paid being those which would be paid for similar articles under the Bethlehem contract. The Department may require any or all of the armor ordered under this contract to be of nickel instead of simple steel, if this be found desirable.

The time required for the necessary extension of their existing plant has been found to be much greater than was anticipated by the company, and although some experimental plates have been produced, no deliveries under the contract have yet been made.

The results of tests of nickel steel plates described under the head of armor trials have been such as to convince the Department of the desirability of armoring the new ships with this material, and accordingly, all the armor ordered from Carnegie, Phipps & Co., is to be of nickel steel. About 3,500 tons of armor have thus far been ordered under this contract and its manufacture has at present actually been started.

The Department supplies the nickel for this armor in the form of nickel oxide, about 900 tons of which have been bought with the money appropriated last year for that purpose.

Lieut. Commander A. R. Couden, whose services in the original preparation of the armor contracts are remembered, has charge of this branch of the Bureau's work, and has applied to all its details his well recognized ability and capacity.

ARMAMENT OF NEW VESSELS.

Since the last report the armaments of the *Miantonomoh*, *Newark*, *Concord*, and *Bennington*, and the 8-inch guns of the *Charleston* have been installed.

The Department has directed that the main battery of the *Dolphin* be changed by substituting in lieu of the 6-inch gun at present installed on board that vessel, two 4-inch rapid-fire guns.

The completion of the *Bennington* before the development of the 5-inch rapid-fire guns caused the Department to adhere to the original plan of her battery, *i. e.*, six 6-inch guns.

The 10-inch guns of the *Terror* are completed and will be installed on that vessel whenever she is ready to receive them.

The 10 and 12 inch guns of the *Monterey*, with their mounts, are well advanced and will also be ready for installation when required.

The needs of the service having caused the Department to send the *Lancaster* abroad with her old battery, the Bureau proposes to retain the 8-inch gun and carriage manufactured for her and put them to such use as seems best in the future.

In May last took place the service trials of the dynamite guns of the *Vesuvius*. They were conducted by a board of naval officers of which Commander R. D. Evans was president, in accordance with a programme drawn up by the Department. Failure of the gun-working valves of the middle and port guns prevented a proper test of their accuracy, but the starboard guns, the valve of which had been modified by Lieutenant Schroeder, the commanding officer of the *Vesuvius*, worked satisfactorily, and the board considered its accuracy of fire as good under the circumstances of the trial.

The effect of a moderate sea and wind on the general efficiency of the gun was found by the board to be slight and the vessel is said to have behaved satisfactorily as a gun platform. The appliances fitted for loading and firing the guns and for steering and controlling the

vessel were considered by the board to be crude and capable of great improvement.

The small number of projectiles available rendered this trial inconclusive and a further and more extended test will soon be made after the changes recommended by the board have been made and a new supply of projectiles has been obtained.

The bankruptcy of the Dynamite Gun Company renders it impossible to fix a date for this trial, which must wait until the company is able to furnish projectiles unless the Department itself undertakes their manufacture, and the Bureau desires to recommend that this course be adopted.

While the report of the board of officers of the accuracy of the guns of the *Vesuvius* leaves the question still in grave doubt whether the system is of any value, it is nevertheless highly improbable in the nature of things, due weight being given to the effect of the movements of the gun platform or of a strong cross wind blowing, that they are effectively accurate.

The Bureau considers this vessel in no respect fitted as a gun platform for artillery of this description, even if the latter proved of any military value. It will be readily appreciated that unarmored as the *Vesuvius* is, her stores of high explosive, and a large portion of the length of her guns are completely exposed to the fire of rapid-fire ordnance. The effect of a single shell, from the 1-pounder in her magazine of high explosives may be imagined.

The vessel, as is well known, possesses only indifferent steering qualities, and this being the case, it is probable that two torpedo boats of the type of the *Cushing* armed with an auto-mobile torpedo and with rapid-fire guns of smaller caliber would very much overmatch her. It is considered, therefore, that the question of the value of the guns for war purposes should receive an early conclusion.

It is believed that the range of efficiency of the *Vesuvius* would be greatly increased by turning her into a torpedo cruiser. Her displacement is such that, with her dynamite guns removed, and a battery of considerable power placed for fore and aft fire, supplementing the larger calibers of rapid-fire guns with a number of 6-pounders this vessel would then become a formidable antagonist for any of the unarmored types.

The assignment and classification of all ordnance material for the vessels now building and the preparation of estimates and publications for the Bureau have been intrusted to Lieut. A. E. Culver, and his industry and thoroughness merit the Bureau's commendation.

MONITORS.

The Bureau, having in view the necessity of utilizing the old monitors in ordinary in the James River, near Richmond, Va., has caused designs to be made of new turrets for these vessels, mounting two 8-inch guns and not exceeding in weight their present armament. As an alternative, the Bureau proposes to mount a single 10-inch B. L. R. in the present turrets of these monitors, and three 10-inch guns, which are already available, will be held in reserve for this use should it prove at any time desirable. The adoption of either of these plans would make a considerable addition to the defensive forces of the United States at small expense and in a short time.

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SMOKELESS POWDER.

By a printer's error in my report of last year it was made to appear that this station had contented itself with the examination and reproduction of foreign powders of the class known as "smokeless." This was far from being the case. Soon after I assumed charge of the station my attention was called by the honorable Secretary of the Navy and by the present Chief of the Bureau of Ordnance to the necessity then existing in the service for a smokeless powder that should at least equal the best of the foreign powders of this class. The subject was at once taken in hand, and at the date of the report above referred to encouraging progress had been made. It is with great gratification that since that time, through the labors and professional ability of Prof. Munroe, I have been enabled to present to the Bureau a powder which in all respects equals, and in many excels, the most successful of the foreign powders.

An interesting résumé of the reasoning and experiments which resulted in the invention of this powder was given in a report by Prof. Munroe in April last, a copy of which has been forwarded to the Bureau.

The qualities which, in addition to smokelessness, it has been sought to combine in this powder may be briefly stated as follows: First, progressive rate of burning, so that a high initial velocity of the projectile may be obtained without undue straining of the gun; second, uniformity, or in other words complete physical and chemical homogeneity, so that charges of equal weight will always produce the same ballistic effects under the same circumstances; and, third, permanency, that is, that the powder shall not deteriorate while stored or when subjected to considerable changes of temperature.

The first of these qualities, as appears from published reports, has been obtained in many of the foreign powders. Although they differ to some extent among themselves in the ballistic effects produced, it may be granted that a number of them give excellent velocities with quite moderate pressures. An examination of the powders, however, discloses a decided lack of homogeneity in many of them, so that it is not surprising that the results of firing equal charges show marked variations.

But it is in the quality of permanency that the foreign powders are deficient. They deteriorate, become sensitive, and develop unexpected pressures. The reason for this is not difficult of determination when the constitution of the powders is known. It is due to one or both of two causes; first, the use of substances which are unstable at all temperatures; and, second, the addition of a volatile constituent which, by its evaporation, changes the constitution of the powder.

The tests of the powder produced at this station have shown it to possess unusual ballistic qualities. A charge of 42 grains fired in a small caliber (0.301 inch) rifle imparts to a bullet weighing 215 grains a mean observed velocity, at 60 feet from the muzzle, of 2,100 feet per second, with a chamber pressure of about 12 tons to the square inch. The grade of powder adapted to the 3-pounder rapid-fire gun gave a muzzle velocity of 2,250 feet per second, with a chamber pressure of 14.8 tons. In the 6-pounder Hotchkiss gun a velocity of 1,920 feet per second was obtained with a chamber pressure of 14.3 tons. A grade of powder for the 4-inch and 5-inch guns has been manufactured, but has not yet been tried.

The concordance of the results obtained with the powder by different experimenters at widely separated points and with independent apparatus has been remarkable. In one case only do the results reported with it differ materially from those reported by other observers, and in this case it can be shown that the anomalous results were due to imperfect methods of experiment. In a previous portion of this report reference has been made to the different character which the explosion of various explosive substances may assume, according to the method by which the explosion is produced and the nature of the initial explosive agent. The smokeless powder is not an exception to this general rule.

Uniformity is secured by the method of manufacture which is such as to give a homogeneous product. Microscopic and chemical examinations of the substance at different stages of the manufacture disclose no variation in different portions of the material. The finished powder is a dense, hard mass, not friable, and entirely structureless.

The endeavor has been to obtain in this powder a substance which will be permanent under all circumstances. To this end the materials used in the manufacture are carefully purified. The finished powder contains no unstable nor any volatile constituent, and it is reasonable assumption that it will itself be stable, though this feature can only be determined by experience. Repeated heating for prolonged periods has no apparent effect upon it. Although it will not burn when wet, it is not permanently affected by water, even by boiling in water. A sample has been subjected to the action of a mixture of ether and alcohol for five weeks without change, though this solvent will break down in a short time all other smokeless powders examined here. Repeated efforts to detonate it with fulminate of mercury have been unsuccessful, even when closely confined in stout wrought-iron cylinders. It is not detonated by influence, a charge of 65 grains of the powder contained in a copper case and placed 0.79" (2 cm) from a block of gun cotton weighing 100 grams (over one-fifth of a pound), being simply scattered when the gun cotton was detonated by 35 grains of mercury fulminate. These latter experiments constitute a much more severe test than any to which the foreign powders of this class have been subjected so far as appears in the literature of the subject. A résumé of them is submitted as an appendix to this report.

The machinery for the manufacture of the powder has all been devised at the station. The machines are all novel except the incorporating mill which has been adapted from a tool found in the market.

I am, sir, your obedient servant,

The SECRETARY OF THE NAVY.

WM. M. FOLGER,
Chief of Bureau.

REPORT OF THE CHIEF OF THE BUREAU OF CONSTRUCTION AND REPAIR.

THE SINGLE-TURRET MONITORS.

The attention of the Department is again directed to these vessels, which are at present a source of expense and, not being kept in efficient repair, of no use whatever in an emergency. It is recommended

that some action be taken by the Department by which such of them as are in condition to justify such an expenditure may be overhauled and thoroughly repaired. The remainder, that are found on examination not to be worth repairing, to be sold.

For a comparative moderate sum they can be made useful adjuncts to whatever other means the country may possess of repelling an enemy; their shallow draft rendering them especially adaptable for service in the smaller harbors of our own coast, which sea-going armored vessels of modern design can not enter on account of their great draft, and where consequently they would only be exposed to the attacks of unarmored cruisers.

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THE WOODEN STEAM VESSELS OF THE NAVY.

The wooden steam vessels of the Navy are rapidly disappearing from the active list of the service, some being condemned, some having been sold, while others are being utilized as training and receiving ships, and still others are laid up in ordinary, having exceeded the 20 per cent limit allowed for the repairs of such vessels. Only twelve are now available for cruising purposes, and they, within five or six years, will be mustered out of service, as their repairs exceed the limitary amount fixed for that purpose.

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TORPEDO CRUISER NO. 1.

The usefulness of this class of vessels has been shown very clearly in the late Chilean revolutionary war, when the ironclad *Blanco Encalada* was torpedoed and sunk by the torpedo gunboats *Almirante Condell* and *Almirante Lynch*; owing to their size, and consequent less fatigue of crew, together with an ample coal supply, they were enabled to operate a long distance from their base of supplies. If they had not possessed these features, especially the ability to keep the sea, the attempt would doubtless have been unsuccessful, if indeed attempted at all.

The particular functions of this class of vessels are to chase and destroy torpedo boats, to act as torpedo boats themselves when opportunity presents itself, and as lookout and dispatch vessels in fleet operations. To this end they are to be provided with batteries of numerous quick-firing guns of sufficient power to penetrate any unarmored vessel, with very high speed, and with efficient torpedo-launching apparatus. In addition, the machinery is protected by a judicious arrangement of the coal bunkers, in combination with thin armor plates.

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VESSELS IN COURSE OF CONSTRUCTION.

Appendices K and L contain reports from naval constructors showing the condition of work on vessels in course of construction at navy-yards or under contract at private yards.

The Bureau takes great pleasure in calling the attention of the Department to the satisfactory progress made in the construction of the coast line battle ships *Massachusetts*, *Indiana*, and *Oregon*. These vessels are the most important of any whose construction the Department has yet undertaken, and on their completion the Government will be in possession of a type of ship whose powers of offense and defense are

unsurpassed by any vessel yet designed; for not only is the battery more powerful, but all of the guns' crews, with the exception of those of the 6-pounder rapid-fire guns, have armored protection on all sides from an enemy's rapid-fire guns, the 13-inch and 8-inch B. L. R. being placed in closed revolving turrets, while the 6-inch B. L. R. are in armored casements, protected on the inboard side by armored screens which completely inclose the gun stations. This feature of the design, namely, giving the gun crews of the 6-inch and 8-inch B. L. R. armored protection on all sides from the disastrous effect of the projectiles of rapid-fire guns, is adopted in all the most recent foreign designs.

HARBOR DEFENSE RAM.

Congress, by act of March 2, 1889, authorized the construction of a twin-screw, armor-plated, harbor-defense ram, upon the design of Rear-Admiral Ammen, U. S. Navy.

PROTECTED CRUISER NO. 13.

This vessel is a sister ship of Cruiser No. 12, better known, perhaps, as the *Pirate*, and is similar to her in hull, engines, and armament. Her construction was authorized by the naval appropriation act approved March 2, 1891; under date of March 11, 1891, bids were advertised for, and they were opened June 1, 1891. The contract was awarded to the William Cramp & Sons Ship and Engine Building Company, Philadelphia, Pa., and provides for the completion of the vessel two years from date of contract.

Cruisers Nos. 12 and 13 are of quite a different type from the ordinary protected cruiser, their function being not only to act as commerce destroyers, but to advantageously engage the converted commerce destroyers, their armament and protection being sufficiently heavy for this purpose. The features to which prominent attention have been given in the design are speed and endurance, the total coal bunker capacity of No. 13 being 2,400 tons.

These vessels have occasioned considerable comment abroad, some very able English critics contending that England has at present no type able to cope with them.

TORPEDO BOAT NO. 2.

The contract for this vessel was awarded on September 16 to the Iowa Iron Works, at Dubuque, Iowa, to be built in accordance with the plans and specifications furnished by the Department.

The principal dimensions, etc., of torpedo boat No. 2 are:

Length on normal load water line	feet..	150.00
Breadth at load water line	do...	15.50
Breadth, extreme	do...	15.62
Draft amidships, normal	do...	4.75
Normal displacement	tons..	120
Indicated horse power		1,800
Speed (at normal displacement)	knots..	24

In conclusion, the Bureau desires to express its satisfaction with the progress of the work of building up a navy suited to the needs of the United States. When the vessels now under construction are completed,

the country will possess the nucleus of a modern fleet, complete in all of its types, from the most powerful armored battle ships to sea-going torpedo boats. These vessels, designed with special reference to the needs of our own naval service, and to fulfill requirements of construction as severe as those of any nation in the world, will be, ship for ship, superior to most, and second to none, of the vessels of any foreign fleet now built or building. It only remains for Congress to decide what number of each class are necessary for the protection of the country.

Much of the value of a fleet of modern steel ships will, however, depend upon their being kept continually in a state of thorough repair. The experience of the past few years, both at home and abroad, tends to show that there is, even in time of peace, under the conditions of ordinary cruising, no inconsiderable amount of work necessary to be done to maintain these vessels in a satisfactory condition. During any period of emergency when it becomes necessary to suddenly mobilize all available ships, or to expeditiously repair a number of vessels that have been injured in action, the amount of work thrown upon the navy-yards will be immensely increased. With their present plants the yards will not be able to carry on the ordinary repair work of the new steel fleet with the rapidity to be desired, and any emergency will find them inadequate to perform the work required.

While the work of new construction can be advantageously performed in private shipbuilding yards, each one of which would become a construction yard for building new ships in time of war, and so be a most valuable aid to the Government, yet the work of repairing and fitting out ships must be done at the navy-yards, since there only can be found united the various departments whose several services are needed to fit a ship out for sea, and the depots of necessary military supplies.

As our fleet has changed from the wooden steamers of a few years ago, whose construction required appliances differing but slightly from those required for building the sailing ships which had preceded them to the steel twin or triple screw ships of to-day, that are practically without sail power, and that must be regarded more than ever as fighting machines on account of the continually increasing number of mechanical appliances with which they are necessarily filled, a corresponding change in the nature of the work to be done in our navy-yards is taking place. It is a natural consequence of that which the ships have undergone, and to be properly met requires as important improvements in the yard plants as have taken place in the ships themselves.

The Bureau desires to call these facts to the especial attention of the Department, as it is of the opinion that they merit the most careful consideration.

I am, sir, very respectfully,

THEODORE D. WILSON,
Chief Constructor, U. S. N.,
Chief of Bureau.

Hon. B. F. TRACY,
Secretary of the Navy.

ANNUAL REPORT
OF THE
SECRETARY OF THE INTERIOR.

DEPARTMENT OF THE INTERIOR,
Washington, D. C., November 1, 1891.

SIR: The years of the present administration have been marked to a notable degree by the expansion of the public domain for private settlement. European nations strive with one another to plant colonies beyond their borders, even in Africa and on distant islands; but our country is so fortunately situated that within its own boundaries are vast tracts of fertile land heretofore unused, on which communities can establish themselves in a single day, and be protected by an almost instantaneous but easy and peaceful application of our system of laws and government to their new relations.

In two previous annual reports of the present Secretary the measures taken and results attained in this direction were set forth as the most important events occurring in this Department under your supervision. The narration must now be continued for the year just past.

OKLAHOMA—NEW PURCHASES OPENED TO SETTLEMENT.

The peaceful and efficient overtures of the government have been met in an intelligent spirit by the different Indian tribes visited by Commissions, and for valuable considerations large portions of their reservations have been ceded for settlement. Agreements were made by the Cherokee Commission during the previous fiscal year in the territory of Oklahoma with the Sacs and Foxes of the Mississippi, the Iowas, the Absentee Shawnees, and the Citizen Pottawatomies. These agreements were ratified by Congress at its last session. The allotments to the Indians were duly made, amounting in most cases to 160 acres each. The counties in this particular region, as well as five other counties in the country of the Cheyennes and Arapahoes, were laid off by the Secretary and lands for county seats designated and reserved.

By your proclamation dated September 18, 1891, all this domain, with required exceptions, was opened to settlement at the hour of 12 o'clock noon (central standard time), Tuesday, September 22. The lands can be acquired only by actual settlers under the homestead or town-site laws. The homesteaders on the lands of the Sacs and Foxes and the Iowas are required to pay, besides fees, \$1.25 for each acre, and those on the lands of the Pottawatomies and Absentee Shawnees, fees, and \$1.50 an acre. The law provided that until these lands were opened no person should be permitted to enter upon and occupy them, and no person violating this provision should be permitted to enter any of the lands or acquire any right thereto. Yet 20,000 persons, as estimated, gathered on the borders in anticipation of the "opening;" some intent upon securing homesteads and others seeking town lots at the county seats. The scenes and events were similar to those that occurred at the first opening of "Oklahoma." A military force was present to guard the lines of the Indian possessions until the day and hour designated, and when the signal that the people might enter was given there occurred a great rush from every direction. All the quarter-sections available, it is said, were taken for homesteads before sunset. The reservations for county seats were occupied within the next few days amid similar scenes.

The first opening of Oklahoma had to be made without any territorial government existing over the lands to be occupied, and the persons making the more recent one, although the organization of territorial government was ready, had to carry the system into lands heretofore occupied solely by Indians, and adapt the laws to a society created between noon and dark.

It is gratifying to state that, as before, so at this second contest of thousands of our citizens for personal advantages, under the most exciting and trying circumstances, a sense of justice and regard for law controlled all alike and to such a degree that there was no occasion for any interference by the military force, and the only injuries received were purely accidental. This promises well for the increasing and already prosperous people of Oklahoma.

The number of acres thus offered for homesteads was nearly 900,000, and the farms allotted to the 2,718 Indians cover 382,863 acres. The county seats of these newly opened lands have already grown into villages. There are homes, shops, professional offices, newspapers, and a postal service. The places named Tecumseh and Chandler are already well known in the geography and commerce of the country.

Judging the future from the past we may expect soon to see these hundreds of thousands of acres not only supporting a great and prosperous community, but furnishing a market for our domestic manufactures and pouring surplus agricultural products into the central markets of our country. For it is a significant fact that a shipment, by special train, of a cargo of wheat from the Oklahoma lands, first opened by your

proclamation on April 22, 1889, was received in August last at one of the "Armour" elevators at Chicago,* and the population has already reached 80,000.

The lands of the Cheyennes and Arapahoes, in Oklahoma, are also nearly ready for homesteads. The agreement with these tribes was made in October, 1890, and has been ratified by act of Congress. It was expected that the lands could be opened at the same time as those just mentioned. A corps of allotting agents was formed in the summer and sent to the field, but the Indians for a month or more refused to act in regard to allotments, and thus not only was time lost, but the appropriation was expended, in large part, without results. Afterward, the Indians consented to come in and the allotment work proceeded efficiently until the appropriation was exhausted. There are in all 3,372 members of these tribes. Eighteen hundred and eight have already allotments, leaving 1,564 yet to be provided for, and to accomplish this an appropriation of at least \$15,000 is necessary. It is urgently recommended that this be made at the very earliest moment in order to have the work proceed. It is required by the contract with the Indians, and will be to the best interests of the country. As soon as the allotments are made there will be 3,000,000 acres ready upon your proclamation for settlement—equal to 18,750 homesteads of 160 acres each.

Besides these lands the Cherokee Commission completed an agreement June 5, 1891, with the Wichitas and affiliated bands adjoining the Cheyennes and Arapahoes on the southeast, by which there are to be allotted to the 1,060 individuals of these tribes 169,600 acres, and surrendered for settlement 574,010 acres; that is, a region equal to 3,587 homesteads of 160 acres each.

The Commission has also completed a contract, dated September 8, 1891, with the Kickapoos, whereby 26,000 acres are to be allotted to the 325 members of the tribe, and 180,466 acres, equal to 1,127 homesteads, opened to settlement. The Kickapoo country lies almost in the center of the lands ceded by the Sac and Foxes, Iowas, Arapahoes, and Absentee Shawnees.

On October 21 of this year the Commission completed its contract with the Tonkawa Indians (located on the former "Cherokee Outlet") for the cession of 90,710.89 acres. The Indians number 67, and their allotments are already made and reserved.

All of the lands above mentioned lie within the boundaries of Oklahoma. The number of Indians elevated to citizenship there will be 7,619. The number (as estimated) of acres to be allotted to the Indians will be 1,129,694, and the area for homestead settlement 4,732,989.

Besides the lands in Oklahoma ceded by the tribes above mentioned there have been made ready for settlement large tracts in other parts of the country; and in addition to the foregoing, allotments have been

* Scientific American, October 24, 1891. See also in this report under head of "Territories," "Oklahoma."

made to many other Indians not visited by commissions, and numerous allotting agents are yet at work.

Over 16,000 Indians have already become citizens of the United States, and about 4,000 more by taking their allotments have signified their desire to become citizens. To these numbers should be added the 7,619 Indians in Oklahoma who have taken or agreed to take allotments. A total of 27,619 Indians naturalized, and total of acres acquired for settlement of about 23,000,000 during the present administration alone.

INDIAN ALLOTTEES.

At the same time that these great advantages have been secured for our fellow-citizens the rights of the Indians have been accurately preserved and their allotments carefully guarded. No complaint of unjust treatment from any of these tribes has reached the Department. The sums of money the several bands have secured for their cessions will partially meet their necessities from year to year by part payment of the principal sums and interest on the remainder. But the great advantage to them will be that each one, having a farm, will be enabled to enter upon a life of industry and self-support, and enjoy other equally beneficial advantages of American citizenship bestowed upon him and accepted by the very act of taking his allotment. He is emancipated from tribal control and the necessity of entering upon brutal and hopeless war with the white man. He acquires a standing as complainant or otherwise in our courts on the same footing as other citizens, except as to his allotments which the government directly guards. He becomes entitled and should be encouraged to send his children to the common schools of the district within which he lives. Thus the individuals of the tribe will become gradually incorporated into the body politic as intelligent and self-supporting members. The United States government will also derive great advantage from the partial relief that will thus be attained from the very expensive system administered through the Indian Bureau, now requiring an expenditure of over \$7,000,000 per annum for something less than 250,000 Indians, all told. Not only is the Indian established as a homesteader and a bread-winner, and being supported in his new life until he learns its ways and realizes its virtues, does he lift himself from idleness and dependence on the United States for support, but the reservations come under the control and protection of state or territorial government, the lands surrendered grow from deserts into productive farms, and the communities upon them add to the nation's agricultural wealth, its commerce, and its strength.

CHEROKEE OUTLET.

The Cherokee Commission has done much work and is still in the field. Its members, Governor David H. Jerome, Judge Warren G. Sayre, and Hon. Alfred M. Wilson are entitled to the highest commenda-

tion for their intelligence, ability, zeal, and industry. But their most important work lies before them. The interests of the Cherokees and the prosperity of Oklahoma and of the adjoining states demand imperatively that the country known as the "Cherokee Outlet," should be taken out of the domain of controversy and opened to homestead settlement. It will thus be converted from a vast, unused, and almost lawless region to a territory occupied by thriving citizens. It is not necessary to enter upon an extended history of the title to these lands. The area to be purchased is about 6,022,754 acres. If the original offer is adhered to, \$1.25 an acre, after deducting amounts already chargeable against these lands (\$728,289.46), the sum to be paid will be \$7,113,846.93. But it is maintained upon authority, and has been recently decided in two courts in Oklahoma, that the Cherokees have not only no fee-simple title, as has been asserted by them, but not even a right to the use of the lands. This question was discussed by the present Secretary in a letter to the chairman of the Cherokee Commission, dated October 26, 1889, and annexed to the Annual Report of 1889, p. 140. It is further discussed, in a letter hereto annexed (Appendix A), dated February 13, 1891, by the Secretary, to Hon. I. S. Struble, M. C., chairman of the Committee on Territories.

On January 17, 1891, a bill was introduced into the House of Representatives to pay for and to throw open these lands to settlement without further delay; and such action may yet be taken. But payment for them must precede a decision against the Indian claim by the United States Supreme Court, to which the Cherokee Nation may take appeals from the decrees rendered in the cases heretofore referred to. If these appeals are decided before the final agreement, and the decision is adverse to the Cherokees, they can, of course, be paid nothing, and the land may be opened by act of Congress or executive order. In the meantime you have required all trespassers to depart from the Outlet and a military force has executed your orders.

There are annexed (Appendix B) your proclamations of February 17 and September 19, 1890, and the orders of the Department made in pursuance thereof.

AGREEMENTS WITH INDIANS DURING THE PRESENT ADMINISTRATION.

The following table exhibits in condensed form the results of the successful labors of the various commissions negotiating with the Indians since the commencement of the present Administration, with dates of agreements, and a summary of lands purchased in Oklahoma.

Memorandum of agreements with Indians during the present administration.

Tribes.	Date of agreement.	Number of Indians.	Number of allotments.	Acres of allotment.	Sections 16 and 36 reserved or not.	When opened.	Quantity of land opened.	Consideration.
Sioux of Dakota (see note)	June, July, and August, 1889.	20,019	None	Not known	Yes	Feb. 10, 1890.	Acres.	(1)
Chippewas in Minnesota.	July, August, September, October, and November, 1889.	4,203	None	Not known	No	After survey, appraisal, and allotment.	*9,000,000 *4,000,000	(1)
Sisseton and Wahpeton (see note)	Dec. 12, 1889.	1,700	1,700	*272,000	Yes	After allotment and payment of money.	*500,000	\$2,203,000
Sac and Fox	June 12, 1889.	518	518	87,684	Yes	Sept. 23, 1891.	391,185	481,000
Yazoo	May 26, 1889.	109	109	8,685	Yes	do	219,446	84,350
Chickasaw	June 25, 1889.	1,493	1,493	286,494	Yes	do	288,892	160,000
Alabama	June 26, 1889.	610	610	None	No	do	*184,000	65,000
Creek	Sept. 9, 1889.	422	None	None	No	Mar. 3, 1891.	*184,000	500,000
Crow	Dec. 8, 1889.	2,456	456	112,000	No	After survey and allotment.	*1,800,000	1,500,000
Chickasaw and Arapaho (see note)	Oct. 1, 1890.	3,372	3,372	153,520	Yes	After proclamation.	*3,000,000	1,500,000
Wichita	Jan. 11, 1891.	1,000	1,000	110,600	Yes	do	*574,000	(5)
Welchville	May 9, 1891.	2,420	None	Not known	No	do	*1,500,000	1,500,000
Fort Berthold (see note)	May 14, 1886.	1,183	None	None	No	May 20, 1891.	*1,500,000	1,500,000
Kickapoo	Sept. 9, 1891.	325	325	136,600	Yes	do	*1,500,000	800,000
Tonkawa	Oct. 21, 1891.	67	67	111,711	No	do	180,492	64,650
Total		42,032	9,592	1,513,694			23,317,949	8,888,000

* Estimated.

† Lands to be sold, etc., for benefit of Indians.

‡ Not ratified.

§ To be fixed by Congress.

OKLAHOMA UNDER AGREEMENTS WITH CREEKS AND SEMINOLES.

Seminole lands	Acres.	405,005
Creek lands	1,392,706	
OKLAHOMA UNDER ABOVE AGREEMENTS.		
Creek lands in Cheyenne and Arapaho Reservation	619,451	
Creek lands in Iowa Reservation	228,413	
Creek lands in Sac and Fox Reservation	419,005	
Creek lands in Pottawatomie Reservation	222,737	
Creek lands in Kickapoo Reservation	206,406	
Seminole lands in Cheyenne and Arapaho Reservation	1,189,161	
Seminole lands in Pottawatomie Reservation	338,194	
Choctaw and Chickasaw lands in Cheyenne and Arapaho Reservations	2,430,160	
Choctaw and Chickasaw lands in Wichita Reservation	743,610	
Total	3,232,770	6,431,905

NOTE.—It is not known how many Sioux will take allotments on the ceded lands, nor how many Chippewas in Minnesota will take their allotments on their separate reservations.

None of the Crow d'Alene lands is to be allotted. Of the 3,372 Cheyennes and Arapahoes, 1,808 have been allotted, leaving 1,564 to be allotted. The whole is estimated for in the table.

None of the ceded land of the Fort Berthold Indians is to be allotted.

The Indians of the Sisseton Agency had their allotments, except married women, prior to the date of agreement of December 12, 1889, in different quantities. By this agreement the allotments were all to be 160 acres. A special agent is now engaged on this work.

HOMESTEAD SETTLERS.

In connection with this great expansion of the public domain for homestead settlement it is gratifying to be able to report that the claims of settlers upon the public lands have been most satisfactorily disposed of since the fiscal year ending June 30, 1888. In his annual report for that year the then Secretary of the Interior stated that upon a thorough examination of the unfinished business of the General Land Office the information acquired "carried a heavy reproach against the Government;" that of final entries there were pending on June 30, 1888, 238,156, and the number of such entries made during the year was 70,368; that this latter number exceeded all the final entries disposed of by patent during the last year, so that instead of a "diminishment" of arrearages the accumulation of cases had increased; that of original entries there were on hand June 30, 1888, 350,953, of which 217,640 were for homesteads. And the Secretary states (p. vii):

It is obvious, however, that it is of great importance to all honest and rightful claimants that the evidence to their title should be speedily issued. Yet how dreary is the prospect opened to the settler by the figures now exhibited by the arrears of business.

Instead of the lamentation so justly indulged in by the Secretary under the preceding administration, the present Commissioner of the General Land Office predicts "that, with the present office force, the business of the Bureau will practically be brought up abreast with current work by the end of the next fiscal year." He gives in his report the facts and figures, setting forth the excellent work done the past years, on which his judgment is based. The number of agricultural patents, which includes those for homesteads, issued for 1889 was 70,141; for 1890, 117,247, and for 1891, 114,360; and there were left of final entries for such lands at the end of the last fiscal year, June 30, 1891, only 84,172. These are results gratifying and encouraging. They reach beneficently our fellow citizens in their homes far away from the capital, and by placing in the hands of the pioneer the title paper to his homestead prove that his government is mindful of its promises and capable of living up to its professions.

IRRIGATION.

Another topic of great national importance connected with the settlement of the public domain is that of irrigation.

It appears by a table published in the Secretary's report for 1890 (p. 2) that, not including Alaska or the Cherokee Outlet or other Indian lands and certain other small exceptions, the vacant lands of the United States amounted to 586,216,816 acres. The amount remaining on June 30, 1891, with same exceptions, was 579,664,683 acres, of which 294,027,773 are yet unsurveyed.

It is estimated that at least 300,000,000 acres of these vacant lands are useless for agriculture, but that 120,000,000 that are now desert may

be redeemed by irrigation, so as to produce the cereals, fruits, and garden products possible in the climate where the lands are located. In the Secretary's annual report for 1890 (pp. 9-14) the question of what legislation was advisable for the establishment of reservoirs and irrigation ditches was discussed at some length, and the same subject has been ably treated by the present Commissioner of the General Land Office in his report for the last fiscal year (pp. 47-53).

In the Secretary's report the following conclusion was reached:

It will be an immense expense to make dams of such solidity and skillful construction as will assure safety to valleys and lands below, and appropriate ditches to and from the basins, or through lands, and Congress may not deem it best to build them, but may consider that the use of the lands segregated for reservoirs should be placed under local control for proper use in irrigation.

Therefore, in view of the facts and ideas already mentioned, the Secretary would urge that Congress should without delay enact comprehensive laws, determining the national policy in this business, and, if the reservoirs are subject to local control, particularly guarding against such misuse of the powers granted as would either allow the upper lands to absorb the water continuously through the dry season, or permit the authorities to require any but the cheapest and most liberal terms for its transportation to the inhabitants and farmers.

The act should sanction its provisions and reservations to these ends by the most severe penalties of forfeiture of the privileges conferred, and of all improvements, with absolute and immediate resumption by national control to preserve and effect its original purposes.

It is believed that if this is done there will never be any occasion for the exercise of the reserved powers, but that with less than this the national Government will abdicate its authority, in a matter of vast importance, to great areas of its lands and millions of its people, and find itself impotent to legitimately control affairs in emergencies that by foresight and wise legislation may now be prevented.

The present Commissioner of the General Land Office closes his discussion of the subject by saying:

The tables given in this report show that during the fiscal year ending June 30, 1891, there was a falling off in original homestead entries made, as compared with the fiscal year ending June 30, 1890, of 2,642 in the number of entries, and 491,284.38 acres in the quantity of land taken up thereby. In final entries of the same class the decrease was 394 in the number of entries, and 106,005 acres in the quantity of land, while the total net decrease in the number of final entries of all kinds during the same period, as compared with the last preceding fiscal year, was 7,736, and in the quantity of land, 1,252,966.39 acres.

Is it sound policy for the Government to remain inactive, while home-seeking citizens are exhausting each other's strength and substance in a fierce struggle to obtain title to the small remaining area on which the rainfall is sufficient, while it may be possible, through a wise policy, to enable every one seeking a home to secure it on the face of the reclaimed desert? There can be but one answer. The problem is a serious one, and its prompt solution is quite as important as its wise solution.

The Director of the Geological Survey has selected 181 sites for irrigating reservoirs, containing an estimated area of 547,012.12 acres, of which 161,768.36 acres appear to have been previously appropriated.

The Commissioner is of the opinion that the wisest plan would be to transfer the land and water to the direct control of the states, subject to such limitations and restrictions as would insure the reclamation of

the land by the states and the transfer of title from the states, in the first instance, to actual settlers in quantity not exceeding 160 acres of land to each settler, with provisions for forfeiture to the United States in case of any violation by the state of the conditions of the grant.

The act of March 3, 1891 (26 U. S. Stats., p. 1095, secs. 5, 6, 7), referred to by the Commissioner, provides for private desert land entries with many new and stringent provisions, and in sections 17, 18, 19, 20, and 21 that the reservoir sites under previous laws shall be restricted to land actually necessary and exclude lands of actual settlers; that a right of way through public lands and reservations be granted to any canal or ditch company formed for the purpose of irrigation under the laws of any state or territory upon proper filings in the Interior Department, *the privilege granted not to interfere with the control of the water for irrigation and other purposes under authority of the respective states and territories*; and, if any section of a canal or ditch be not completed within five years after location of said section, the rights granted to be forfeited as to any uncompleted section to the extent not completed at the date of forfeiture. It further provides that—

Persons entering or proposing to enter separate sections, or fractional parts of sections, of desert lands may associate together in the construction of canals or ditches for irrigating and reclaiming all of said tracts, and may file a joint map or maps showing their plan of internal improvements.

Under this statute there have been already filed maps of location for sixty-one reservoirs and forty-six canals, the canals and ditches being 631.65 miles in length.

Under the desert land law of 1877 reclamation has been made and final proof produced in 5,366 entries, with area of 1,717,120 acres.

It is perceived from these facts that Congress has so far acted that private corporations and associations are now substantially given the field of the water supply for that vast domain that may be redeemed by irrigation, and that this field is being rapidly seized upon. It is one thing for the individual to own his claim on which he resides; it is quite another for him to be a member in a large association, or stockholder in a corporation controlling the water necessary for the cultivation of his claim. The United States by existing legislation does not retain any control, and but weakly and insufficiently establishes the authority of the states or territories. The control of the water is handed over to corporations or associations. These individual associations will be driven to incorporation by the necessity there will be to avoid the frequent changes of ownership and other difficulties arising from death or assignments of interests; and the owners of the water and the owners of the farms may be expected to soon become distinct bodies, with almost opposite interests.

The states or territories may be expected to exercise under the reservation of authority expressed in the above statute some control of these companies and protect their citizens from oppression; but the

United States government, from whom these vastly important and far reaching privileges emanate, should not release altogether its hold upon the water supply and its ultimate distribution. No one can now compute the money value that will concentrate in these reservoirs and canals and ditches conveying the water to the fields of the husbandmen, and upon which the people must depend for their prosperity. The efficiency of local legislation may be impaired by private interests, and a few may be enriched at the expense of the many. And it is also to be remembered that the rivers and streams running through these deserts pass from states to states or territories, and that there is no provision made for any regulation of the use by one state or territory in proportion to what may be reasonably demanded by another. It has been said by an eminent writer on the future of our country that the child is already born who will see 400,000,000 of inhabitants in the United States. Long before this stage of our development is reached the question of the water supply and its distribution will be one of vital interest, and its proper solution should be given now.

It is worthy of notice that the Irrigation Congress, held at Salt Lake City, Utah, September 15-17, resolved, among other things, that it was in favor of granting in trust, upon such conditions as would serve the public interests, to the states and territories needful of irrigation, all lands now a part of the public domain within said states and territories, except mineral lands, for the purpose of developing irrigation, to render the lands now arid fertile and capable of supporting a population, and that a committee should be selected to prepare and present to Congress the memorial of the convention.

It may be that the United States will not endeavor to either build the reservoirs or retain these desert lands for improvement by itself. The expense would be in the aggregate so very great that the national government may not assume it, and the reservoirs, canals, and ditches may be transferred, so far as already located by the United States, to the states and territories, and those yet to be located will be put under local legislation and control. But it would seem absolutely essential that there should be reserved to the United States the power of forfeiture and resumption in case of great abuse or a conflict of interests between states threatening to lead to actual violence between their respective populations, or allowing the irrigation of vast districts to fall into the hands of monopolies without sufficient protection for the people. It is not at all impossible or improbable that one state at the head of the stream, where alone can great bodies of water be stored, will so use the advantage as to deprive the lower state of its due share of the water, or that an improvident state may allow the system to fall into the grasp of the selfish and covetous, without sufficient safeguards for the people dependent for their homes and fields upon a supply of water at cheapest rates. Not only their prosperity but their liberty may rest, then, upon a wise interference by the national government.

The recommendations already made in previous reports are now renewed and the subject is deemed one of such great and pressing importance that Congress should be advised to enact without delay comprehensive laws, determining the national policy upon this subject.

PUBLIC TIMBER AT HEADWATERS.

Connected with the water supply of the arid regions, is the necessity at this time of making systematic reservations from settlement of public lands about the heads of the streams that are to make irrigation possible. Indeed, such reservations should be made for all our streams, but especially for those above referred to. If the timber growth is removed, without consideration for the future, the periods during which the streams give their present usual supply of water will be greatly shortened by floods and droughts.

PERMITS TO CUT TIMBER.

The safety of the public timber was greatly impaired by a provision of the act to repeal timber-culture laws, and for other purposes, approved March 3, 1891 (U. S. Stats., Vol. 26, p. 1095), even as amended by the act of same date (p. 1093). The act had some very desirable provisions, and with the amendment made at the last hours of the last session, you deemed it best to approve it as a whole; but it demands now, it is suggested, further consideration.

The provision referred to, as amended, is in the following words:

In the States of Colorado, Montana, Idaho, North Dakota and South Dakota, Wyoming, and the District of Alaska, and the gold and silver regions of Nevada and the Territory of Utah, in any criminal prosecution or civil action by the United States for a trespass on such public timber lands or to recover timber or lumber cut thereon, it shall be a defense if the defendant shall show that the said timber was so cut or removed from the timber lands for use in such State or Territory by a resident thereof for agricultural, mining, manufacturing, or domestic purposes, under rules and regulations made and prescribed by the Secretary of the Interior, and has not been transported out of the same; but nothing herein contained shall operate to enlarge the rights of any railway company to cut timber on the public domain, provided that the Secretary of the Interior may make suitable rules and regulations to carry out the provisions of this act, and he may designate the sections or tracts of land where timber may be cut, and it shall not be lawful to cut or remove any timber except as may be prescribed by such rules and regulations, but this act shall not operate to repeal the act of June third, eighteen hundred and seventy-eight, providing for the cutting of timber on mineral lands.

The act makes it lawful, subject to the rules of the Secretary, to cut public timber in the states and territories named for so many and such general purposes, that the only restraint imposed is that which the Secretary may see fit to enforce. No one could cut timber not to be described by some one of the words used, "agricultural, mining, manufacturing or domestic," unless it were in mere wantonness. There is no limit as to the time when the timber or lumber made from it is to be so

used, and it may easily be cut within the law and stored for sale, for it is not provided even that it shall be for use by the person cutting it.

The law itself gives every license for felling the forests, and even amendment only authorizes restraint to be exercised by the Secretary of the Interior. Experience has shown that it is very difficult to preserve the public timber under laws providing direct penalties for trespasses, and it can not be doubted punishment will be much less certain for violations of Departmental regulations. Besides this, the statute imposes much more upon the executive officer than he should be required to assume. Already the applications for permits are so numerous as to have demanded a special force in the General Land Office to attend to them, and as people learn the value of these privileges the pressure for them will constantly increase, until, unless the law is repealed or modified, there will be little timber left to protect. The states indicated are not very abundantly supplied at best, and with the increased value of forest products it will take but a small percentage of their population to exhaust every possible claim. It would seem to be much better that the statute should be so made as itself to prevent this result than that so important a matter should be left to the Secretary. This officer changes with each administration, and, so long as there is anything to give, he will find it difficult to refuse to some that which has already been granted to others.

TIMBER RESERVATIONS.

In the meantime an available method to postpone the worst results is indicated in section 24 of the original act (26 U. S. Stats., p. 1103), as follows:

That the President of the United States may, from time to time, set apart and reserve, in any State or Territory having public land bearing forests, in any part of the public lands wholly or in part covered with timber or undergrowth, whether of commercial value or not, as public reservations, and the President shall, by public proclamation, declare the establishment of such reservations and the limits thereof.

If this authority is freely exercised it will anticipate many applications for licenses to cut timber, and it is urgently recommended that Congress take proper action to have the reservations that are proclaimed by the President, established as national public parks or granted to the states to be preserved unimpaired and used for the benefit of the public only. Under this law, on March 30 and September 10, 1891, you proclaimed a reserve about the Yellowstone National Park that should be made a part of that most interesting and valuable possession; and on October 16, 1891, you proclaimed the reserve of the White River Plateau in Colorado, embracing the head waters of the White, Grand, and Yampa rivers.

It will be remembered that on January 20, 1890, you transmitted to the Senate and House of Representatives a letter of Prof. T. C. Mendenhall, chairman of a committee of the American Association for the Advancement of Science and president of that association, and also a

memorial prepared by the committee, relating to the preservation of the forests upon the public domain, and you then earnestly recommended that adequate legislation might be provided, to the end that the rapid and needless destruction of our great forest areas may be prevented. This recommendation has been partially complied with, but attended by the provisions in the act already commented upon.

The memorial mentioned is reprinted as an appendix (C) to this report, and attention is called anew to its valuable opinions and wise suggestions.

The American Forestry Association, and those interested in forestry, have petitioned to have other reserves made, and the Commissioner of the General Land Office and the Director of the Geological Survey are making investigations upon which to base further recommendations for your consideration. Besides the reasons already presented for your favorable action, it is to be considered also that these parks will preserve the fauna, fish and flora of our country, and become resorts for the people seeking instruction and recreation, at the same time that they subserve the important agricultural and economic purposes already indicated. The laws should authorize details from the army, in the discretion of the President, to guard the reserves made from early spring to late autumn, or the employment by the Secretary of a police force under a superintendent; and there should be penalties against the violation of any of the rules and regulations made to govern the reserves, to be enforced in any court of competent jurisdiction.

It is earnestly believed that if these measures are now prosecuted systematically and thoroughly, posterity will look upon the action as that to which the country then owes much of its prosperity and safety.

POPULATION SEEKING SETTLEMENTS.

In connection with the facts already presented in regard to opening the country for settlement, preserving its streams, and improving its condition, it is appropriate to note that the census taken in 1890, under the supervision of this Department and the Census Bureau, concerning which 118 bulletins of the Superintendent have already been issued, shows the population of the United States and Territories to have been in that year 62,622,500, being an increase of 24.86 per cent over that of the year 1880, and that the assessed valuation of property was \$24,249,589,804, being an increase of 43.46 per cent over that of 1880. The increase in value, \$7,346,596,261, is as much as was the true value of all property as returned by the United States census in 1850, which was \$7,135,780,228, and if it be found upon further and complete inquiry that the same relation existed in 1890 between assessed valuation and true valuation as there did in 1880, the absolute wealth of the United States may be estimated at \$62,610,000,000, or nearly \$1,000 per capita as against \$514 per capita in 1860; \$780 in 1870, and \$870 in 1880. (Census Bulletin No. 104.) In this unprecedented increase of population and still more extraordinary advance in values of property may be found the cause of the great demand for new homes and the concentration of so many

thousands upon the places where vacant lands may be found. This demand will increase with each succeeding year, and it is submitted that there should be no relaxation in such administration of the government as will give a fair field for the development of the nation.

This summary of the more important phases of the work achieved by the Interior Department during the last year has been called first to your attention; but the reports relating to the various bureaus, territories, institutions, parks, etc., are full of interest and now demand separate consideration.

PUBLIC LANDS.

The Commissioner of the General Land Office in his report for the fiscal year ending June 30, 1891, covers an administration of nine months under his predecessor and three under himself, and presents many valuable facts and suggestions in regard to the public domain. He shows clearly the marked benefit to the people caused by the change of policy on the advent of this administration, when it found the business of the office was being conducted upon unwarranted assumptions against the honesty or good faith of the settlers upon the public domain. Then the working force of the Bureau was largely employed in efforts to establish fraud, land patents were reluctantly issued, contests were invited and increased greatly in number, heavy expenses were incurred by homesteaders, and the pioneer was to a great degree deprived of the benefits of good government.

The beneficial results of changes made have been noted in a previous portion of this report, but the contrast is tellingly presented by the Commissioner in the following table:

Comparative statement of agricultural and other patents issued by the General Land Office during the fiscal years ending June 30, 1886 and 1887, and the fiscal years ending June 30, 1890 and 1891.

Patents—	Issued during fiscal year ending—		Total.	Issued during fiscal year ending—		Total.
	June 30, 1886.	June 30, 1887.		June 30, 1890.	June 30, 1891.	
Agricultural:	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
Preemption.....	7,782	18,660	26,442	77,340	72,160	149,500
Homestead.....	11,096	5,444	16,540	30,928	38,617	70,545
Timber culture.....	321	354	675	2,266	3,080	5,346
Military bounty land warrants.....	290	50	340	396	327	723
Agricultural college scrip.....	5	13	18	20	12	32
Supreme Court scrip.....	86	13	99	87	20	107
Sioux half-breed.....	1	4	5	13	2	15
Choctaw scrip.....	1	.....	1	.....	.....	.....
Surveyor-general's scrip.....	4	3	7	115	98	213
Dodge scrip.....	6	3	9	.....	6	6
Porterfield scrip.....	1	3	4	.....	2	2
Arredondo scrip.....	289	.....	289	.....	1	1
Coles scrip.....	3	.....	3	.....	.....	.....
Valentine scrip.....	.....	1	1	6	14	20
Wilson warrants.....	.....	2	2	.....	.....	.....
Red Lake and Pembina half-breed.....	.....	2	2	.....	3	3
Special act of Congress.....	.....	.....	.....	.....	9	9
Miscellaneous.....	.....	.....	.....	70	.....	70
Total.....	19,885	24,558	44,443	117,247	114,869	232,116
Mineral.....	675	1,489	2,232	1,407	1,792	3,199
Coal.....	15	53	68	224	226	450

Comparative statement of agricultural and other patents issued by the General Land Office during the fiscal years ending June 30, 1886 and 1887, etc.—Continued.

RECAPITULATION.

Patents issued.	During fiscal years ending June 30—		Increase.
	1886 and 1887.	1890 and 1891.	
<i>Agricultural:</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
Preemption	26,442	149,515	123,073
Homestead	16,540	75,545	59,005
Timber culture	675	5,346	4,671
Military bounty land	346	723	377
Agricultural college scrip	18	32	14
Miscellaneous scrip	422	446	24
	44,443	231,607	187,164
<i>Mineral</i>	2,232	3,199	967
<i>Rail</i>	68	450	382

The disposition of the former accumulation of business in the land office has been rendered somewhat easier by the provisions of section 7 of an act approved March 3, 1891, entitled "An act to repeal the timber-culture law, and for other purposes" (26 U. S. Stats., p. 1095). Technical rules and mere suspicion of fraud will not be allowed longer to long suspend final entries; while on the other hand, by decision as to the proper construction of this law and instructions thereunder, it is believed the interests of the government are duly protected. In accordance with the provisions of this section entries have been acted upon and confirmed, up to June 30, 1891, as follows, viz:

Number of final entries passed to patent where transfer was made prior to March 1, 1888	61
Number of final entries passed to patent in other cases under the proviso, where no action had been taken by this office within two years from date of entry	524
	588
Subsequent to June 30, 1891, and up to September 1, 1891, there were passed to patent of the first class above mentioned	51
Of the second class	1,437
	1,488
Total of both classes passed to patent up to September 1, 1891	2,076

DISPOSAL OF PUBLIC LANDS.

During the last year 2,143,090.78 acres were disposed of by cash sales; 8,214,140.93 by miscellaneous entries, and 120,468.61 acres of Indian lands, aggregating 10,477,700.32 acres. The total cash receipts from various sources for the year amounted to \$5,429,220.14.

The number of agricultural patents issued during the year were 114,360, which, allowing 160 acres to each patent, would embrace an aggregate of 18,297,600 acres.

There were patented for the benefit of railroad companies under Congressional grants during the year 3,088,679.23 acres.

SWAMP LAND PATENTS.

During the fiscal year ending June 30, 1891, an area of 408,127.55 acres was patented to the states, an increase of 298,775.66 acres over the fiscal year last preceding.

STATE SELECTIONS APPROVED FOR EDUCATIONAL AND OTHER PURPOSES.

The approvals during the year under the different grants to the several states for educational purposes and under the saline grant, having the effect of a patent, embraced an area of 756,172.91 acres.

INDIAN AND MISCELLANEOUS PATENTS.

The area of the land patented during the year on private land claims, donations, and Indian allotments, or selections in severalty, and scrip locations finally approved, amounted to 244,600.74 acres.

The patents issued during the year, contrasted with those issued during the previous year, are as follows:

Recapitulation of patents issued, as stated in the foregoing.

Patents.	1890.	1891.	Increase.	Decrease.
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
Agricultural.....	18,752,520.00	18,297,600.00	.....	451,920.00
Mineral.....	33,473.72	31,728.65	.....	1,745.07
Swamp lands.....	109,551.83	408,127.55	298,775.66	.....
Railroad lands.....	363,862.15	3,088,679.23	2,721,817.08	.....
Indian and miscellaneous.....	109,053.02	244,600.74	135,547.72	.....
Selections.....	539,779.84	756,172.91	216,393.07	.....
Total.....	19,915,043.62	22,826,900.68	3,375,530.53	463,665.07

Total net increase, 2,911,865.46.

SURVEYS OF PUBLIC LANDS.

The appropriation (approved August 30, 1890) for the survey and re-survey of the public lands for the fiscal year ending June 30, 1891, was \$425,000, of which sum \$40,000 was authorized by the act to be applied to the examination of surveys, etc., and the balance was apportioned as shown in the following table:

Districts.	Amount.	Districts.	Amount.
Arizona.....	\$5,000	New Mexico.....	\$10,000
California.....	10,000	Oregon.....	20,000
Colorado.....	15,000	Utah.....	5,000
South Dakota.....	40,000	Washington.....	85,000
North Dakota.....	40,000	Wyoming.....	20,000
Idaho.....	20,000	Total.....	355,000
Minnesota.....	10,000		
Montana.....	75,000		

The surveys accepted during the year were for the following areas:

States and Territories.	Acres.	States and Territories.	Acres.
Arizona	170, 770	Nebraska	244, 458
California	254, 095	Nevada	47, 294
Colorado	272, 353	New Mexico	157, 136
South Dakota	3, 346, 639	Oregon	368, 255
North Dakota	46, 053	Utah	365, 327
Florida	62	Washington	375, 041
Idaho	119, 128	Wyoming	373, 911
Louisiana	63, 208	Oklahoma	1, 337, 322
Minnesota	110, 430		
Montana	390, 522	Total	8, 006, 004

The chief recommendations made by the surveyors-general are summarized in the Commissioner's report, which presents the needs of the different sections of the country in the matter of surveys.

The statute expressly requires that preference shall be given in favor of surveying townships occupied in whole or in part by actual settlers, and that the surveys shall be confined to lands adapted to agriculture and to lines of reservation.

In some sections of the country it is difficult to determine what is agricultural land, and, as stated in the report of the surveyor-general of Arizona—

What would be agricultural land if water was brought onto the land may be at the present moment the most barren of desert lands, and consequently, though agricultural in point of soil, not agricultural in the practical sense of the word.

UNITED STATES MAPS AND PLATS.

In the report for the year ending June 30, 1889, particular attention was called to the recommendation of the Commissioner, that an appropriation be made sufficient to continue the reproduction, by photolithography, of the worn, defaced, and needed plats on file in that office. He now recommends that at least \$25,000 be appropriated for that purpose, and states—

The demand for copies of the official plats of surveys from General Government and State officials, from individuals and corporations, and for office use is great and constantly increasing. There are about 24,000 of such plats that need to be reproduced, and unless the appropriation for such service is increased it will be many years before the work can be completed, and this delay is a serious inconvenience to the Government and all concerned.

PRIVATE LAND CLAIMS.

The officers provided for in the act of Congress approved March 3, 1891 (26 Stats., 854), entitled "An act to establish a court of private land claims and to provide for the settlement of private land claims in certain States and Territories," have been duly appointed; the court has been organized, and due notice given as provided by law.

The first session of the court will be held at Denver, Colo., on Tuesday, November 17, 1891.

The claims that will come before this court for settlement are of Spanish and Mexican origin, and involve lands within the cession by Mexico to the United States by the treaty of Guadalupe Hidalgo and the subsequent Gadsden purchase.

The court is the result, in part at least, of the previous most earnest recommendations of the present and other Secretaries of this Department as approved by the President. It will greatly lighten the labors of the Commissioner and Secretary, and do complete, if tardy, justice to the people of the several states and territories over which its jurisdiction extends.

By sections 16, 17, and 18 of the act establishing this court recognition is given to a class of small holdings, not to exceed 160 acres in each case, by persons, or their "ancestors, grantors, or their lawful successors in title or possession," who became citizens of the United States by reason of the treaty of Guadalupe Hidalgo, etc.

The Commissioner estimates that there are from fifteen to twenty thousand claims of this character. In his annual report for 1890, the Secretary presented the obstacles, to private entries, met by settlers on these former Spanish possessions. It was then said:

The population of New Mexico when acquired by the United States was 80,000 and some of the wealthy held large tracts of land, but the people were, for the most part, very poor. From the days of Charles V of Spain to the annexation, wherever it was thought proper to found settlements, the viceroys and residents gave, in the name of the Emperor, lands, house lots, and waters, in conformity with the disposition of the land. Under the Republic of Mexico the colonization laws and regulations became a very complete system, well adapted to the people and the country, and were intended to bestow upon each one without land a portion of the public domain. Because of the system of irrigation practiced, the lands cultivated, sloping down the hills, were of irregular shape and apt to be separated by divisions among heirs and subsequent union of ownership of separate parcels by marriage, without consolidation of the tracts themselves.

This prevents entries now of these tracts under the existing land laws of the United States, because the lands are not deemed to be according to our system of surveys and the claimants do not reside on many of the tracts cultivated.

The Commissioner quotes from the last annual report of the surveyor-general of New Mexico, showing the necessity of further legislation in relation to these claims. There is a map presented exhibiting the nature of these settlements, and in connection with it the surveyor-general remarks:

It is evidently the intention of the law to enable the people to get title to the little irregularly-shaped pieces of land which they have occupied and cultivated from time immemorial.

This is accomplished by section 16, where the land is unsurveyed, but the greater part of the settled portions of the Territory is surveyed land.

How can a landholder on surveyed land comply with the law?

As a sample of the manner in which land has become divided up during generations and is now held in the Spanish settlements throughout this Territory, I have prepared the following diagram of a portion of the township lying immediately west of the city of Santa Fé.

The section and quarter-section lines are indicated by dotted lines, and the boundaries of the different owners by full lines.

These little strips of land, the smallest of which is but 20 varas or 55 feet wide, are held only by the title of uninterrupted and peaceable possession, reaching back 50 years or more.

These lands were segregated from the Mexican domain, and are held by the right of prescription under the laws, usages, and customs of Spain and Mexico.

The treaty of Guadalupe-Hidalgo covers such cases, and obliges the United States to respect them. To disregard them now would be to confiscate their homes and commit a wanton injustice.

How can Casme Carillo, for instance, who owns a strip of 50 varas or $8\frac{1}{2}$ rods wide, amounting to 40 acres, on which is his home and his little cultivation near the river, and running back across three sections over the hills where he gets his firewood; how can this landholder have a survey of his strip made, connecting his lines with corners of the public survey, and by filing such survey and making proofs of the facts enter this strip at the local land office? If he can do so, full instructions should be issued to the register how to proceed in such cases. If he can not, under the law, enter his land, it is earnestly requested that the Department ask for such an amendment of the law as will enable him to do so.

It is unworthy of the Government to tender to this people justice and free titles to their lands, and then couple with this liberal offer conditions that they can not comply with, and further exact that their homes shall be confiscated at the end of 2 years if these impossible conditions are not complied with.

Justice requires that this law be amended as soon as possible, so as to allow the entry of lands in pieces of the shapes in which they are actually held.

The impossibility of describing the small holdings by legal subdivisions is apparent, and it is recommended that Congress be asked at its next session to enact such further legislation as will make available to this class of persons the privilege intended to be granted them, and that the period within which such claim must be filed under the law be extended.

CONTESTS.

The Commissioner's report shows a marked decrease in the amount of work pending in the contest division. *The unappealed cases are practically up to date, and the appealed cases have been reduced to 321.*

RAILROAD LAND GRANTS.

The matter of the adjustment of railroad land grants, as contemplated by the act of March 3, 1887, presents for decision many varied and important questions, and from the numerous interests presented and the large values involved, much care and research are necessary for a proper disposition of the same, and from the magnitude of the work progress is necessarily slow. The chief causes of delay are lack of surveys and the mineral complications; that is, the actual conditions of the lands inside railroad limits with regard to mineral deposits. The position of the Department on this question is that the discovery of the mineral character of land at any time prior to the issuance of patent therefor effectually excludes such land from a railroad grant that contains a provision reserving all mineral lands therefrom. Some of the

United States circuit courts have held that the right of the company attached at the date when the line of its road was definitely fixed, and that lands that were not then *known* to be mineral lands would pass under the grant. The subject is discussed at length in the Secretary's opinions, to be found in Decisions of the Department relating to Public Lands, vol. 11, p. 238, and vol. 10, p. 365. The Supreme Court of the United States must eventually settle the question. In the mean time patents will be refused for all lands deemed to be mineral within the provision of the statutes.

Adjustments of the grants to aid in the construction of railroads have been approved by the Department in a number of cases and others are in progress. The list of railroad selections awaiting examination at the close of the fiscal year amounted to 28,846,577.56 acres; the selections for wagon roads amounted to 305,246.67 acres; making 29,151,824.23 acres embraced in pending lists of selections for railroad and wagon-road construction.

By the act of Congress approved September 29, 1890, all lands heretofore granted to any state or to any corporation to aid in the construction of a railroad opposite to and conterminous with the portion of any such railroad not completed and in operation at the date of the passage of said act were forfeited, and proper instructions have been issued to the local officers of the districts in which the forfeited lands lie, ordering their restoration to the public domain, except in certain cases where questions are pending that may affect the amount.

The passage of this act relieves from suspension many cases involving lands in railroad limits where a portion or all of the road was built, although out of time. The benefits resulting will redound to the settlers, who have long ago purchased their farms from the railroad companies, and are now cultivating the soil. The adjustments are due to these citizens rather than to the original grantees, the railroad companies, and the work will be dealt with on this basis.

RIGHT OF WAY TO RAILROADS.

The whole number of railroad companies claiming the right of way over the public lands, under the general right-of-way act approved March 3, 1875, or under special acts, is 392, of which the articles of incorporation filed by thirty-two companies were approved during the last year.

ACT OF MARCH 3, 1891, REPEALING TIMBER-CULTURE AND PREEMPTION LAWS.

This act makes many important changes in the system of laws for the disposal of the public lands, the principal of which are the repeal of the timber-culture and preëmption laws; the modification of the desert-land law of March 3, 1877; the amendment of the homestead laws; granting of the privilege to cut timber from the public lands in certain

states and territories, under certain restrictions; the inhibition against public sale of any part of the public lands, except abandoned military or other reservations, isolated tracts, and mineral and other lands the sale of which is specially authorized by Congress. In its provision is made for the disposal of public lands in Alaska for manufacturing and commercial purposes and for town sites, and for the adjustment of conflicting town-site and mineral claims; right of way for the construction of canals and ditches for irrigation purposes are granted, and the President is authorized to set apart and reserve lands where, to preserve timber, he shall deem it advisable.

Instructions have been issued for the guidance of the local officers, under this act, construing its provisions and giving such directions as were deemed advisable to give effect to the measure. The effects of this statute as to irrigation and upon the public timber have already been discussed in this report.

VACANT PUBLIC LANDS.

The following table, showing the vacant public lands of the United States, by states and territories, surveyed and unsurveyed, is designed to inform correspondents and the general public as to the amount and location of the public lands remaining subject to disposition:

Recapitulation of vacant lands in the public land States and Territories.

State or Territory.	Surveyed land.	Unsurveyed land.	Total.
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
Alabama.....	947,310		947,310
Arizona.....	11,342,214	43,718,791	55,061,005
Arkansas.....	4,998,398		4,998,398
California.....	36,326,517	15,972,982	52,299,499
Colorado.....	36,614,499	5,552,531	42,167,030
Florida.....	2,669,151	799,230	3,468,381
Iaho.....	4,740,786	29,041,065	33,781,851
Iowa.....	3,000	3,000	6,000
Kansas.....	799,078		799,078
Louisiana.....	1,141,729	101,389	1,243,118
Michigan.....	781,816		781,816
Minnesota.....	2,910,455	3,939,520	6,849,975
Mississippi.....	1,201,280		1,201,280
Missouri.....	1,023,898		1,023,898
Montana.....	10,790,999	63,581,770	74,372,769
Nebraska.....	11,065,436	395,600	11,460,436
Nevada.....	29,472,117	23,859,748	a 53,331,865
New Mexico.....	39,444,239	15,449,440	54,893,679
North Dakota.....	5,811,910	10,323,530	16,135,440
Oklahoma.....	1,230,917	2,271,489	3,502,406
Oregon.....	24,791,353	14,423,799	39,215,151
South Dakota.....	5,024,202	9,061,192	14,085,394
Utah.....	6,917,840	28,511,147	35,428,987
Washington.....	5,432,891	14,968,800	20,401,691
Wisconsin.....	1,003,133		1,003,133
Wyoming.....	38,794,084	12,048,350	50,842,434
Total.....	285,280,251	294,027,773	a 579,308,024

a This aggregate is exclusive of Ohio, Indiana, and Illinois, in which, if any public land remains, it consists of a few small isolated tracts; it is exclusive of the Cherokee Strip, containing 8,044,644 acres, and all other lands owned or claimed by the Indians in the Indian Territory west of the ninety-sixth degree of longitude, contemplated to be made a part of the public domain by the fourteenth section of the act of March 2, 1889 (25 U. S. Stats., 1005), and it is also exclusive of Alaska, containing 577,390 square miles, or 369,529,600 acres, of which not more than 1,000 acres have been entered under the mineral laws, and includes 350,659 acres of mineral land in Nevada, in addition to the quantities given under the head surveyed land and unsurveyed land in the foregoing table.

IRRIGATION.

The Commissioner discusses the subject of irrigation at some length and with ability in his report. His conclusions have already been quoted, and it would be unfair to attempt to condense his views as set forth by himself. It is well, however, to call attention to the fact that he states there has been a falling off of 2,642 original homestead entries made during the year, as compared with the previous year, and in final entries of the same class the decrease was 394, while the total net decrease in the number of final entries of all kinds during the same period was 7,736, and from this, and the great rush for homesteads at the recent opening of lands in Oklahoma, he considers it apparent that the demand for homes on the public domain is greater than ever before in the history of the country.

PROTECTION OF PUBLIC LANDS AND TIMBER BY SPECIAL AGENTS.

One thousand seven hundred and fourteen cases of depredation were referred to the special agents for investigation, hearings were ordered in 238 cases, 694 cases were held for cancellation, 444 canceled, and 1,846 examined and passed. Final action was taken in 3,401 cases, and there are now pending in the division (June 30, 1891) 5,525 land cases. Four hundred and eighty-eight cases have been reported by special agents during the year, involving public timber and the products therefrom to the value of \$2,347,473.11 recoverable to the Government. The amount accepted under propositions of settlement was \$53,863.03; the amount paid in during the year on propositions of settlement accepted during previous years was \$439.07, and the amount recovered through legal proceedings so far of record (the United States attorneys' reports for various districts not having been received up to the date of preparing this report) is \$62,402.47. This makes a total amount of repayments on account of depredations upon the public timber of \$116,704.57, an excess over the appropriation for this branch of the public service.

On the 1st of July, 1891, as far as reported, there were shown to be pending in the United States courts 203 civil suits for the recovery of a total amount of \$4,451,305.07 for the value of timber reported to have been unlawfully cut from public lands, and 361 criminal prosecutions for the act of cutting or removing timber in violation of law.

In addition to the above result of work accomplished by the special timber agents, they have during the year investigated and reported upon a large number of fraudulent land entries.

FORESTS.

Attention has before been called to the fact that the most valuable timber on the public lands is being rapidly exhausted.

The provision in the act of March 3, 1891 (26 Stats., 1095), for the establishment of reservations will do much to preserve valuable forests from spoliation.

The Commissioner is of the opinion that the necessities for a general law upon this subject can not be too strongly urged upon the attention of Congress, and that the provisions of the law should be in the line suggested in the report made on Senate bill No. 1394, to which reference was made in the Secretary's last annual report (p. 16). In this connection the Commissioner calls attention to the disadvantages incident to the execution of the laws through special agents, in consequence of the form in which appropriations have been made by Congress for this service.

The appropriations read as follows:

DEPREDACTIONS ON PUBLIC TIMBER: To meet the expenses of protecting timber on the public lands, one hundred thousand dollars.

PROTECTING PUBLIC LANDS: For the protection of public lands from the illegal and fraudulent entry or appropriation, one hundred and twenty thousand dollars.

SETTLEMENT OF CLAIMS FOR SWAMP LAND AND SWAMP-LAND INDEMNITY: For salaries and expenses of agents employed in adjusting claims for swamp lands and for indemnity for swamp lands, twenty thousand dollars: *Provided*, That agents and others employed under this and the appropriations for "Depredations on the public timber," and "Protecting public lands," while traveling on duty, shall be allowed per diem in lieu of subsistence at a rate not exceeding three dollars per day, and for actual necessary expenses for transportation.

He continues: Under these provisions the Comptroller of the Treasury holds that the per diem and expense account of an agent appointed to investigate *public-timber* trespasses can not be allowed when it appears that the agent was employed during the time stated in the work of investigating fraudulent entries of *public land* or in reporting on *swamp land* selections. The same rule is applied to each of the three classes of agents. But it not infrequently occurs that swamp land selections, fraudulent land entries, and timber depredations are to be investigated in the same locality. Under the law as heretofore framed in such case it is absolutely necessary, regardless of expense or loss of time, to send three agents to the locality referred to, when one agent could investigate and report all the cases in a particular neighborhood, taking them in proper order. By adopting this method of procedure the expenses of transporting additional men would be avoided and the time lost in unnecessary travel could be profitably employed. In other words, the efficiency of the service would be promoted and the expenses reduced.

Actuated by these considerations the Commissioner, in submitting estimates for the coming fiscal year, has consolidated these three items for special service in the following language:

Depredations of public timber, protecting public lands, and settlement of claims for swamp lands, and swamp land indemnity; to meet expenses of protecting timber on public lands and for the more efficient execution of the law and rules relating to the cutting thereof; of protecting public lands from illegal and fraudulent entry or appropriation, and of adjusting claims for swamp lands and indemnity for swamp lands: *Provided*, That agents and others employed under this appropriation shall be allowed per diem in lieu of subsistence at a rate not exceeding \$3 per day and actual necessary expenses for transportation; three hundred thousand dollars.

Under this form of appropriation agents may with freedom be assigned to duty in either branch of the service. The efficiency of the service would be promoted and the expense to the government reduced by the consolidation and the recommendation is approved for your favorable consideration.

The reason for the increase in the estimate for this branch of the service of \$60,000 over that for the current year is due to the examinations and investigations connected with the administration of the laws of March 3, 1891. The designation of the tracts on which the cutting of timber will be permitted and the enforcement of needful rules and regulations governing the same will greatly increase the demands for the service of special agents; further, the period of limitations established by said act, within which all investigations must be made as to the validity of entries, and the large accumulation of work awaiting examination within a limited period, necessitates the proposed increased force of special agents.

SWAMP-LAND GRANTS.

After the lapse of forty years swamp-land grants yet remain unadjusted. Several methods have been exhausted by the states, viz, selection by the United States surveyor-general, by agents appointed by the states to offer proof of swampy character, and of selection from the field notes of survey. Now some states dispute the sufficiency of the field notes to justify a rejection of the states' claim to lands conclusively shown by the field notes not to be of a swampy character.

The act of March 3, 1857, confirmed to several states all lands selected and reported up to that date. By such confirmation the states became possessed of large quantities of fine agricultural lands, erroneously selected as swamp lands. The evident purpose of this act was to aid the adjustment of these grants, but it seems to have produced the effect of inviting additional claims in great numbers, and, as there is no limitation upon the time within which selections may be made, no estimate can be made as to the amount which may be selected.

Claims for cash and land indemnity are still pending on 2,312,949.22 acres, and several states claim large quantities of land subject to cash and land indemnity for which they have not as yet presented formal lists. Some of the states have by legislative action transferred their rights to cash and land indemnity to the several counties; and the counties in many instances authorize energetic agents to prosecute their claims upon contingent commissions, and the government has been put to great expense in examining lands selected indiscriminately by them. Unless an act is passed limiting the time within which selections may be made, this expense upon the government will be continued from year to year for an indefinite period of time, and while legislation limiting the time within which selection may be made of swamp lands in place may not be deemed expedient, it seems some limitation is neces-

sary upon the period within which indemnity may be claimed, whether in land or cash.

The Commissioner is of the opinion that within a period of three years all legitimate claims could be filed, and recommends legislation forever barring all claims for cash, land, or other indemnity under the swamp-land laws, not presented within three years from the date of the passage of such an act. As this privilege has existed since 1858 the period of limitation suggested would give ample time for the assertion of any claims not heretofore filed. There is necessity for Congressional action in the matter of the adjustment of these grants, and it is recommended that the matter be specially called to the attention of Congress.

GENERAL LAND OFFICE NEEDS ROOM IN A GOVERNMENT BUILDING.

The accommodations now afforded to the General Land Office are inadequate for the proper disposal of its great and extending business and for the care and preservation of its important records, upon which rests the foundation of titles of millions of homes upon the public domain.

The portion of the Patent Office building assigned to the Land Office was diminished during the last year, and it became necessary to secure quarters elsewhere, necessarily involving great inconvenience, danger to records, and loss of time in the transaction of the public business. By the act of March 3, 1891 (26 Stats., 941), an appropriation was made of \$16,000 for the rent of buildings for the use of the General Land Office, but sufficient space could not be found in an available building, and it was deemed inadvisable to scatter different portions of the office over the city, thus exposing the records to loss, injury, or destruction.

Furthermore, to separate the several divisions of the office would greatly interfere with the dispatch of the public business, as there is an intimate relationship and interdependence existing between all these. Two thousand eight hundred dollars only have therefore been used of the \$16,000 available under said act.

The Commissioner recommends the erection of a suitable public building, owned by the government, affording adequate accommodations, and that proper provisions be made therein for the greater security of Land Office records. He suggests that such a building might be further utilized for the preservation of the records of the several land offices and offices of the surveyor-general when discontinued; that there would be great advantages in the concentration of the records in one place, and that in the way suggested it might be accomplished with comparatively little additional expense.

These suggestions are worthy of serious consideration, and the attention of Congress, it is recommended, should be called to this important subject, so that it will be impressed with the necessity for immediate action.

IMPORTANT LAND DECISIONS.

In the disposition of cases arising under the administration of the public-land laws many new and interesting questions have come before the Department. In their solution the Secretary acknowledges the very valuable assistance given by the Assistant Attorney-General assigned to this Department, and of the departmental First Assistant Secretary. Among others may be mentioned those cases arising under the late act of March 3, 1891 (26 Stat., 1095), repealing the timber-culture act, and making many other modifications of the previous laws with respect to our public lands.

CONFIRMATION OF ENTRIES.

Section 7 of said act makes special provision for the confirmation of two classes of entries in the following terms:

All entries made under the preëmption, homestead, desert-land, or timber-culture laws, in which final proof and payment may have been made and certificate issued, and to which there are no adverse claims originating prior to final entry and which have been sold or incumbered prior to the first day of March, eighteen hundred and eighty-eight, and after final entry to bona fide purchasers, or incumbrancers, for a valuable consideration, shall, unless upon an investigation by a Government agent, fraud on the part of the purchaser has been found, be confirmed and patented upon presentation of satisfactory proof to the Land Department of such sale or incumbrance: *Provided*, That after the lapse of two years from the date of the issuance of the receiver's receipt upon the final entry of any tract of land under the homestead, timber-culture, desert-land, or preëmption laws, or under this act, and when there shall be no pending contest or protest against the validity of such entry, the entryman shall be entitled to a patent conveying the land by him entered, and the same shall be issued to him; but this proviso shall not be construed to require the delay of two years from the date of said entry before the issuing of a patent therefor.

In the construction of that portion of said section which applies to entries transferred or incumbered prior to March 1, 1888, it was held in *Axford vs. Shanks*, 12 L. D., 250, and same on review, 13 L. D., 292, that the intention of said section is to confirm entries allowed in the absence of adverse claims originating prior to final entry, where parties, relying in good faith upon the issuance of final receipt and certificate, had invested money on the strength of the prima facie title held by the entryman, and that the confirmatory operation of this legislation is not defeated by the pendency of contests or protests, and this construction is now the rule of the Department.

As to entries included within the proviso to said section, where no interests of transferees are involved, it was held, in the departmental instructions of April 25, 1891, 12 L. D., 522, that said proviso is one of limitation upon contests initiated after the passage of said act, but does not relieve entries from the effect of contests that were pending at the date of said enactment.

It was further held in the construction of said proviso that in all cases

where proceedings by the government have been, or shall be, begun against an entry within two years from the date of the final certificate, said entry will be held to be taken out of the confirmatory operation of said proviso; and that the word "proceedings" in such construction shall be construed to include any action, order, or judgment had or made in the General Land Office cancelling an entry, holding it for cancellation, or which requires something more to be done by the entryman to duly complete and perfect his entry, without which such entry would be necessarily canceled. (13 L. D., 1.)

In addition to the above class of cases, memoranda in a few other cases of special note are submitted herewith.

FORFEITED RAILROAD LANDS.

In construing the forfeiture act of September 29, 1890, it was held that the language in section 2 of said act authorizing a "second homestead entry" refers only to those persons who had theretofore made a homestead entry, but failed from any cause to perfect the same, the object of such provision being to allow any one qualified, who had not theretofore secured a piece of land under the homestead law, to obtain a tract of the forfeited land under said law, and at the same time to take said land out of the operation of the preëmption law. (11 L. D., 625.)

FORFEITURE OF RAILROAD GRANT.

The case of the Tennessee and Coosa Railroad Company involved the rights of the company under the forfeiture act of September 29, 1890 (26 Stat., 496), and in the disposition of the case it was held that the construction of a fractional part of a section of 20 miles, the whole road not being completed, does not entitle the company to any lands under the grant of June 3, 1856; and that the failure of the company to construct any portion of the road in accordance with the terms of the grant renders it subject to the forfeiture act of September 29, 1890, not only as to the uncertified lands, but also as to the 120 sections certified in advance of construction, provided such sections are in the possession and control of the state or company, and have not been sold to innocent purchasers for value. (12 L. D., 254.)

RAILROAD RIGHT OF WAY.

In the matter of the right of way approved on the application of the Union River Logging Railroad Company, a rule was laid on said company to show cause why said approval should not be revoked. On the response to said rule, it was held that the Secretary of the Interior has the power to recall, annul, and set aside the action of his predecessor in office in approving the map of definite location or profile of a railroad, filed under section 4, act of March 3, 1875, where such approval is procured by fraud and misrepresentation, and for a purpose not authorized

by law; and the order of approval made for the benefit of said company was accordingly revoked. (12 L. D., 574.)

DESERT LANDS.

On September 12, 1877, Mr. Secretary Schurz issued an order suspending all desert entries made in Visalia, California land district, and directed an investigation to be made before the local land officers as to the character of each tract entered. The order of suspension applied to desert entries numbered 1 to 337, inclusive. The hearings were duly had in accordance with said directions, but prior to January 12, 1891, no final action had been taken looking toward a release of said entries from suspension or rendering judgment thereon. On the date last named, in the case of the United States *v.* James B. Haggin, the Department took up the questions presented by the previous action of the Department, and revoked the order suspending said entries, and gave directions for the disposition of all contests pending against said entries and the reception of final proof that may be submitted by claimants. (12 L. D., 34.)

OKLAHOMA TOWN SITE.

A number of interesting questions have come before the Department under the legislation authorizing the opening of Oklahoma lands to settlement and entry. Among these may be cited the case of Guthrie Town Site *v.* Paine *et al.*, in which it is held that a town-site entry can not be allowed where it is apparent that the application is in the interest of a fraudulent speculation; that a soldiers' declaratory statement, filed on April 22, 1889, through an agent who was in the territory prior to 12 o'clock noon, of said day, is illegal and void; and that the entry of one who is lawfully within said Territory prior to noon, April 22, 1889, but takes advantage of his presence therein to secure a settlement right in advance of others, is in violation of the statute opening said lands to entry; and further, that a town-site entry can not be allowed in the interest of those who entered said territory prior to the time fixed in the President's proclamation and in violation of said statute.

RIGHT OF WAY—INDIAN RESERVATIONS.

In an opinion upon the rights of the Duluth and Winnipeg Railroad Company, under the provisions of the act of June 2, 1890 (26 Stats., p. 126), it was held that the first section of said act granted to said company a right of way through the Indian reservations mentioned therein, defined its extent, giving the company a right to take material for the construction of its road, and granting land for station purposes, limiting the number that may be constructed within said reservations; that prior to acquiring any vested interest in any part of the right of way, station grounds, etc., the company must duly file plats showing the definite location of its road and station grounds; and upon the approval

thereof, must pay to the Indians the compensation fixed by the Secretary of the Interior, the consent of the Indians having been obtained as required by the second section of said act. (Vol. 5, p. 198.)

In an opinion rendered April 20, 1891, upon the application of the Bayfield Transfer Company for right of way and station grounds within the Red Cliff Indian Reservation, it was held that the action of the Secretary in authorizing a railroad company to proceed with the construction of its road across an Indian reservation, pending the completion of the necessary arrangements, is not final in its character and confers no vested rights; that the proviso contained in section 5, act of March 3, 1875, does not render the provisions of said act generally applicable where a right of way is provided for under treaty stipulation, but only provides that when, by prior treaty or act of Congress, a right of way with definite limits or other privilege has been specifically granted, the provisions of said act shall govern so far as applicable. It was further held that conveyances for right of way purposes, executed by Indians holding under patents in which the right of alienation is limited by a requirement that the President's consent thereto shall be obtained, must be submitted to the President for his approval. (12 L. D., 481.)

ALASKA.

In response to a reference by the Secretary of the Interior of a request by the President that he be informed under what statute it is proposed to make certain reservations in Alaska pursuant to a recommendation of the governor thereof, an opinion was rendered giving the status of the lands in Alaska, the usual method of creating military and Indian reservations, and submitting a draft of an executive order for the purpose of reserving certain lands therein described. (Vol. 5, 197.)

UNION PACIFIC RAILROAD COMPANY.

In response to a reference of Senate resolution of July 3, 1890, asking "whether the guaranty or any payments, or both, referred to in the resolution, are in accordance with law and consistent with the obligations of said Union Pacific Railroad," the relation of said company to the Government was fully considered, and it was held that the action of the company in guaranteeing the principal and interest of certain railroad companies did not violate any of its obligations to the United States. (Vol. 5, p. 211.)

KAWEAH COLONISTS, CALIFORNIA.

In the case of the Kaweah colonists claiming certain lands within the limits of the reservation for a National Park in California, created by acts of September 25 and October 1, 1890, it was held, (1) that final entries of any of said lands prior to Executive withdrawal of legislative reservation, *prima facie* valid, should be recognized as valid until duly

canceled by the land department; (2) that the parties who have not made entries of said land, but have merely made filings thereon and are cutting timber therefrom, should be considered trespassers and removed from the reservations; and (3) that homesteaders who have not made final entries, and are cutting timber for the purposes of sale and not for the purpose of clearing the land for cultivation, should be restrained by judicial action. (Vol. 5, 432.)

INDIAN AFFAIRS.

The administration of Indian affairs has been attended with reasonable success during the last fiscal year. The labors of the Commissioner and the very able Assistant Commissioner have been great, and the Bureau has also demanded continuously the attention of the Secretary. Its interests are so widespread and important, and the occasions demanding action so sudden, that the gravest responsibility and anxiety arise from its management. It is therefore gratifying to report that in the common judgment of those familiar with and interested in the Indians' welfare this service has been greatly improved during the last few years.

Under your immediate direction, the selection of Indian agents has been exercised with the greatest care, and in no instance when it has appeared such an officer chosen was inefficient has there been any hesitation to make a new appointment. The immediate and tangible results of good government that the Indians appreciate, and which they have been allowed to enjoy more now than ever before, are those giving them physical comfort; freedom from the evils of insufficient food, poor clothing, indifferent shelter, and at least partial emancipation from the vices of drunkenness, profanity, gambling, and lechery that have too long afflicted them. It is in vain to appeal for obedience to law or acquiescence in plans for their education and moral training to tribes who are hourly suffering from want and abuse.

It is the great improvement brought about in these physical conditions that has laid the foundation upon which is being erected that efficient and broader system of education and morality now adopted and practiced as the policy of the government.

It is not claimed that perfection has yet been reached, or that there are not frauds yet practiced upon the government in Indian affairs; but it is believed that these have been immensely diminished, and are being rapidly exterminated.

The Commissioner of Indian Affairs, in his extended report, has displayed more at large the features of this policy and made many suggestions for the future regulation of this Bureau. Many of these are based upon the experience and history of the Indian Bureau, and they fairly epitomize the general features that have been introduced into its management.

POPULATION.

The Indian population, as reported by the Commissioner for the fiscal year ending June 30, 1889, is 250,483, exclusive of the inhabitants of Alaska.

The statistics of Indians, as compiled and furnished in Bulletin No. 25 of the Census Office, issued January 29, 1891, present with other information the following details:

The total Indian population of the United States, exclusive of Alaska, but including 32,567 counted in the general census, being the taxed or taxable Indians, numbers 249,273. The following table gives the division of the Indians in detail:

Indians on reservations or at schools, under control of the Indian Office
(not taxed or taxable) 133, 382

Indians incidentally under the Indian Office, and self-supporting:

The Five Civilized Tribes, Indians and colored:

	Indians.	Colored.	Total.
Cherokee Indians	25, 357	4, 242	29, 599
Chickasaw Indians.....	3, 464	3, 718	7, 182
Choctaw Indians	9, 996	4, 401	14, 397
Creek Indians	9, 291	5, 341	14, 632
Seminole Indians	2, 539	22	2, 561
			<hr/> 68, 371
Deduct number of colored persons probably not mem- bers of tribes (estimated)			3, 500
			<hr/> 64, 871
Indians other than Chickasaws in that nation			1, 161
Indians other than Choctaws in that nation			257
Population of the Five Civilized Tribes:			
Indians.....			52, 065
Colored Indian citizens and claimants.....			14, 224
			<hr/> 66, 289
Total			66, 289
Pueblos of New Mexico			8, 278
Six Nations, St. Regis, and other Indians of New York			5, 304
Eastern Cherokees of North Carolina			2, 885
Indians taxed or taxable and self-sustaining citizens counted in the gen- eral census (98 per cent not on reservations).....			32, 567
Indians under control of the War Department, prisoners of war (Apaches at Mount Vernon Barracks).....			384
Indians in State or Territorial prisons.....			184
			<hr/> 249, 273
Total.....			249, 273

INDIAN SCHOOLS.

It is shown by the report of the Commissioner of Indian Affairs that the enrollment of pupils in the schools conducted for the education and training of the Indian youth reached during the year 17,926 pupils, an increase over the previous year of 1,545 pupils; and that the average attendance was 13,568 pupils, or an increase of 1,336 pupils over the previous year.

This attendance includes that at the industrial training schools, the reservation boarding schools, and the reservation day schools.

The existing school buildings and facilities provided by the Government afford accommodation for Indian pupils as follows:

	Pupils.
In nonreservation Government industrial training schools	4, 085
In reservation boarding schools	5, 319
In reservation day schools	3, 120
Total	12, 524
There are accommodations in schools conducted under contract with religious associations for	5, 255
In addition to the above contracts have been made with public school districts for the education of Indian children to the number of	100
Making a total school capacity for the past fiscal year of	17, 879
New schools, the establishment of which has been specially authorized by appropriations made by Congress, but which have not yet been completed or put in operation, will provide ample accommodations for	675
The construction of new schools on reservations, and the enlargement of others now in progress, will further increase the accommodations for about	1, 500
Making the total number of pupils that can be accommodated with means already provided	20, 054

Some confusion is introduced by the Commissioner in his tables by adopting new names for these schools. The accounts heretofore transmitted from the Bureau in these newly adopted names have, because thereof, been rejected by the accounting officers of the Treasury, as wholly unauthorized.

The appropriations for the schools have largely increased from year to year, and the liberality of Congress has been pronounced during the present administration. In 1888 the appropriation for the support of Indian schools was \$1,179,916; in 1891 it was \$1,842,770; and for 1892 it is \$2,291,650. The sum asked for the year ending June 30, 1893, is \$2,917,060, which includes the amount asked for buildings, and the Commissioner estimates that the cost for Indian education which was submitted in his annual report for 1889 may be relied upon. It was as follows:

Amount required to put and support all Indian children in Government schools.

New buildings and furnishings for 9,410 boarders, at \$230 per capita	\$2, 164, 300
New buildings and furnishings for 4,217 day pupils, at \$1,500 for every 30 pupils	210, 000
Repair and improvement of present buildings	50, 000
Additional furniture, apparatus, stock, tools, and implements	50, 000
	2, 474, 300
Support of an average of 15,000 boardings pupils, at \$175	2, 625, 000
Support of an average of 6,600 day pupils, at \$62.50	412, 500
Transportation of pupils	40, 000
Superintendence	25, 000
	3, 102, 500

COMPULSORY EDUCATION.

The Indians, as a rule, have consented so readily to sending their children to the schools that it was not found necessary immediately to enforce attendance as authorized by act of March 3, 1891. But very recently such rules and regulations have been made and published because of the discharge of a pupil from a school by decision of Judge Green, of a district court of Oklahoma, in habeas corpus proceedings brought by one Abraham Lincoln, an Iowa Indian of that territory, to recover the custody of his 17-year old boy, who, with the father's consent, was attending the Chilocco Indian industrial training school located on the Cherokee Outlet. The father desired to withdraw his son from the school because he considered the discipline too rigid and the comfort of the boy not sufficiently provided for, and because the boy was required to work in the field and garden and at other similar service. The decision rested on the point that no such rules and regulations as the law authorized had been made for the compulsory attendance of Indian children. Action to remove this objection was therefore taken. These rules are annexed to this report. (Appendix D.) This is the first step in a departure from the ancient method of treating the Indian with either so much respect or indifference as to leave him from generation to generation but little advanced in civilization or comfort. It is expected that no great degree of force will be found necessary, and when it is, it will be employed only with the knowledge and consent of the President. The great body of the different tribes have become quite in favor of schools, under the care with which their interests have been recently advanced, and the number of children whose attendance may have to be compelled will be very small indeed.

No statute for compulsory education can reach those Indians who have or may become citizens through allotments already taken. They become entitled, however, to the advantages of the common schools where they live, and the several states and territories where they are will no doubt take due care of their education. The citizen Indians will have equal claims with the colored race upon the protection and educational advantages of the local governments, and there can be no reasonable doubt these will be willingly and bountifully bestowed out of the proceeds of the munificent gifts of land made to these states by the United States.

The allotment law, commonly known as the Dawes bill, has secured for its author the praise of all interested in the welfare of the Indians. It has been accepted as the very best means of solving the Indian problem, and it is now, as has been pointed out in the earlier part of this report, receiving an administration, chiefly by written consent and agreement of the Indians, that promises to develop rapidly its benefits for allottees.

INDIANS IN PUBLIC SCHOOLS.

The following expressions in the Commissioner's report are noted with pleasure:

The Government schools are modeled after the public schools, and the Indian pupils who are educated in the Government Indian schools understand their workings, and pass easily into the public white schools as opportunity offers. Those educated in these schools will be prepared, as they become citizens of the United States, to understand and appreciate the value of the public school, and will seek to establish and maintain such for their own children. The Indians will thus be brought into close sympathetic relationship with one of the greatest American institutions.

and the facts shown by the following table:

Public schools at which Indian pupils were placed under contract with the Indian Bureau during the fiscal year ended June 30, 1891.

Name and location.	Date of contract.	Number of Indian pupils.
California: Carbon, Shasta County, Albion School District.....	June 18, 1891	8
Minnesota: Richwood, Becker County, District No. 4.....	May 1, 1891	10
Nebraska:		
Santee Agency, Knox County, District No. 36.....	Jan. 2, 1891	8
Omaha Agency, Thurston County, District No. 6.....	Jan. 9, 1891	10
Oregon: Seaton, Lane County, District No. 32.....	Mar. 20, 1891	5
Utah:		
Cedar City, Iron County, District No. 1.....	Jan. 2, 1891	5
Portage, Box Elder County, District No. 12.....	July 17, 1890	39
Washington: Rockland, Klickitat County, District No. 1.....	Apr. 13, 1891	15

It is expected to have this number greatly increased, as by this means not only will the Indians be more rapidly civilized, but the white children coming in such contact with them will become more tolerant towards them, and disposed to regard their rights of person and property.

CONTRACT SCHOOLS.

Besides the schools above mentioned, there are numerous contract schools supported in whole or in part by appropriations by Congress. The names and amounts appropriated from 1886 to 1892 are set forth in the following table:

Amounts set apart for various religious bodies for Indian education for each of the fiscal years 1886 to 1892, inclusive.

	1886.	1887.	1888.	1889.	1890.	1891.	1892.
Roman Catholic.....	\$118,343	\$194,635	\$221,169	\$347,672	\$356,957	\$363,349	\$387,420
Presbyterian.....	32,995	37,910	36,500	41,825	47,650	44,850	44,310
Congregational.....	16,121	26,696	26,080	29,310	28,459	27,271	29,146
Martinsburg, Pa.....	5,400	10,410	7,500	Dropped.			
Alaska Training School.....		4,175	4,175				
Episcopal.....		1,890	3,690	18,700	24,876	29,910	19,980
Friends.....	1,960	27,845	14,460	23,383	23,383	24,742	24,742
Mennonite.....		3,340	2,500	3,125	4,375	4,375	4,375
Middletown, Cal.....		1,523	Dropped.				
Unitarian.....		1,350	5,400	5,400	5,400	5,400	5,400
Lutheran, Wittenberg, Wis.....			1,350	4,050	7,500	9,180	16,200
Melbodiat.....				2,725	9,940	6,700	13,980
Miss Howard.....				275	600	1,000	2,000
Appropriation for Lincoln Institution.....	33,400	33,400	33,400	33,400	33,400	33,400	33,400
Appropriation for Hampton Institute.....	20,040	20,040	20,040	20,040	20,040	20,040	20,040
Total.....	228,259	363,214	376,264	530,995	562,640	570,218	601,000

The Commissioner, in connection with these schools expresses a very strong conviction (p. 68), that while the support should not be given from the public funds, there should be no violent or sudden change; no action that can be construed as partial or unjust; but a gradual extension of the national system until it embraces the entire work.

While there were enrolled in the government schools for the last year 11,449 pupils, whose average attendance was 8,399, there were for the same year in the contract schools (not including industrial boarding schools especially appropriated for) enrolled 7,168, with an average attendance of 4,006, which may be taken as about the number in the schools referred to as sectarian. Evidently a conviction by Congress that these pupils are being illegally supported would immediately deprive one-third of all those now being educated of any of the advantages they at present enjoy. The Indian Bureau is not prepared for such results; nor does the Commissioner act upon it himself, but continues his recommendations and estimates for these institutions for the next fiscal year. Governmental support of these contract schools has been of such long standing, and so much money has been invested alongside and because of it by those who have undoubtedly the best interests of the Indians at heart, that a sudden withdrawal of support would be lamentable. It is hoped that the appropriations may not be refused, but that the policy of this as well as previous administrations may be continued. The present Secretary, in the annual report for 1889 (p. 47), expressed himself as follows:

It therefore seems but a step to extend this system so as to have it embrace and affect, with the *coöperation of the church mission schools*, the whole youth of the Indian tribes. This coöperation has long existed; the missions have placed much reliance upon it, and its sudden withdrawal would be neither generous nor fair. The national system may grow very rapidly and yet others be most welcome as co-workers in this benevolent cause; but the national system should have precedence, and in case of conflict it should be preserved and advanced.

The President in his annual message at the opening of the Fifty-first Congress, stated in regard to this matter:

School attendance should be promoted by every moral agency, and those failing, should be compelled. The national schools for Indians have been very successful, and should be multiplied, and, as far as possible, should be so organized and conducted as to facilitate the transfer of the schools to the States or Territories in which they are located, when the Indians in a neighborhood have accepted citizenship, and have become otherwise fitted for such a transfer. This condition of things will be attained slowly, but it will be hastened by keeping it in mind. *And in the mean time that coöperation between the Government and the mission schools, which has wrought much good, should be cordially and impartially maintained.*

POLITICAL RELATIONS OF INDIANS.

The Commissioner in his report discusses at some length the relations which the Indian sustains to the government of the United States.

In view of the abundant decisions of the Supreme Court of the United

States as to the status of the Indians, the numerous statutes regulating their relations to the white men, to the government, and to each other, and the very long period of time during which this system of judicial construction and legislative treatment has been developed and acted upon, this status is not deemed very doubtful, nor a matter in regard to which any extended legislation is required. Efficient administration of what we have, it is believed, will be a source of much more benefit to the Indian than the multiplication of laws. Such administration is being given, and, as has been proven, with immense improvement of the Indian's condition in every way. But there are among the conclusions stated by the Commissioner one or two, without passing upon others, that are particularly noticeable. He remarks (p. 36), as to

COMPULSORY EDUCATION OF CHILDREN OF ALLOTTEE CITIZENS.

The General Government has the right, both for its own protection, for the promotion of the public welfare, and for the good of the Indians, not only to establish schools in which their children may be prepared for citizenship, but also to use whatever force may be necessary to secure to the Indian children the benefit of these institutions. Even in the cases where, by taking their lands in severalty, they are in process of becoming citizens, they are still in a state of quasi-independence, because the General Government withholds from them for twenty-five years the power of alienating their lands, while by exempting them from taxation for the same period it practically excludes their children from the public schools. For these reasons it would seem that the Government has not only the right, but is under obligation to make educational provisions for them, and to secure to their children the benefits of those provisions.

In a previous portion of this report it has been said that the allotment bill, commonly styled the "Dawes bill," whereby, through the effect of allotments, citizenship is conferred upon the allottee, has had general recognition and approval. We should not now interfere with its principal provisions or defeat any of its beneficent effects. Its purpose is to change the Indians from the state of wardship to citizenship. This process has been going on for many years, and with increased force from year to year. There are no facts furnished upon which it can be asserted that the results of this policy are injurious to the Indians, or threatening to become so, while there is abundant evidence that severance of the tribal relations, the establishment of the Indian upon his own property, and the opening of his great reservations to white settlement have been conducive to the welfare of all concerned. By virtue of the statute the naturalized Indian becomes entitled to the protection of the laws of the several states and territories and to the benefits of the common-school system, wherever he may be. He has these rights, and if they are not practically enjoyed the effort should be rather to secure them from the local authorities than to take the Indian back into the care of the national government or to keep him there. If compulsory education is enforced upon Indians who have taken allotments it will be the establishment of the right as against

all other citizen inhabitants of the several states or territories, or it will be necessary to modify the provisions of the Dawes bill and make of the allottees merely quasi-citizens; that is, not citizens as now.

For unqualified citizens the Indians do now become upon allotments taken, and unless the allotment act is to be repealed, or its provisions in the most important features marred, compulsion will be as inapplicable to these citizens as to others. The states and territories within which the allottees dwell are equally interested with the United States, in their education, if not indeed to a greater degree. The Indians should be entitled to participation in the public school system there. But above all, and to this the greatest weight should be given, they are placed through the process of allotment upon an independent footing, and compelled to exercise all of the care and economy that white men do, both to maintain themselves by labor and to educate their own children, either through the public school system or otherwise. The education of a child upon the land of the allottee who is pursuing the course of a husbandman will be in itself most desirable. It is clear that we must adhere either to the system adopted, and now being pursued, in its entirety, or we must repeal the act so far as it makes the allottee a citizen and thus perpetuate the tribal relations in all that makes them objectionable. It is deemed that no evil consequences will result from allowing matters to take the course they are now following. There is no education to be attained through any system of schools, however elaborate and expensive, that would compensate for such retrogression in the policy of the government, a policy most wisely conceived, and now for a long time beneficially enforced.

COURTS FOR INDIANS.

That the Indian should have the protection and privileges of the courts is certainly desirable where he is in such a stage of advancement that he can understand the proceedings and be prepared for the results. It would be wise legislation to perfect without delay a code of procedure enlarging the jurisdiction of the courts for Indian Offenses on Indian reservations. The Indians' wrongs spring either from the acts of white men trespassing upon their property and personal rights on the reservations or from unjust acts of Indians against each other, as it is not intended that the jurisdiction will be extended over the government or its officers for supposed offenses committed by them. Such extension of a system of law to enable the Indians to appeal to the courts for their personal protection should be preceded by a most careful survey and marking by conspicuous monuments of the boundaries of their reservations. If this be done, there can be but little opportunity for trespass by white men without detection and punishment upon complete proof. But, unfortunately, the most of the reservations are undefined, or if defined upon the map, not marked by suitable and obvious monuments upon the ground. This leads to immense wrong upon the Indian and to private speculation. The trespasser against whom the Indian would

appeal to the court finds it easy to prove either that he was not upon the reservation, or, if he were, that it was under such circumstances that anyone might be mistaken, and thus gain sympathy and favor. There can be no just and efficient system of law applicable to a territory not well and plainly known and marked. This, however, is but a small matter to precede the inauguration of a legal system, and needs but little legislation to accomplish it. It should be done in any event, and it is recommended that a sufficient appropriation be made to survey where need be, and in every case to clearly mark, with frequent monuments, the boundaries of the different Indian reservations. If this be done, and there is an efficient administration of the laws already existing, there can be little opportunity for interference by others with Indians on the reservation. And if, also, the system of law applicable to the Indians themselves as administered through the courts for Indian offenses is perfected and enforced, the field will be very effectually covered.

The American Bar Association has taken recently much interest in this subject, and it would be a pleasure in all ways to assist in a full presentation of the views and plans of its committee either to you or to Congress.

PUEBLOS.

Upon a case referred, the Assistant Attorney-General assigned to the Department of the Interior gave it as his opinion that the paragraph in the Indian appropriation bill authorizing and directing the Commissioner of Indian Affairs, subject to the direction of the Secretary of the Interior, "to make and enforce by proper means such rules and regulations as would secure the attendance of Indian children of suitable age and health at schools established and maintained for their benefit" was not intended to include the Pueblo Indians of New Mexico. The discussion of that question is contained in the opinion dated May 4, 1891, and is annexed (Appendix E). In it is quoted the language of the Supreme Court of the United States in the case of the United States *vs.* Joseph (94 U. S. Stats., 614-619). Justice Miller rendered the opinion, which after speaking of the nomadic Apaches and others incapable of self-government, proceeds as follows:

The Pueblo Indians, if indeed they can be called Indians, had nothing in common with this class. The degree of civilization which they had attained centuries before, their willing submission to all the laws of the Mexican Government, the full recognition by that Government of all their civil rights, including that of voting and holding office, and their absorption into the general mass of the population (except that they held their lands in common), all forbid the idea that they should be classed with the Indian tribes for whom the intercourse acts were made, or that in the intent of the act of 1851 its provisions were applicable to them. The tribes for whom the act of 1834 was made were those semi-independent tribes whom our Government has always recognized as exempt from our laws, whether within or without the limits of an organized State or Territory, and, in regard to their domestic government, left to their own rules and traditions; in whom we have rec-

ognized the capacity to make treaties, and with whom the Government, State and National, deal, with few exceptions, only, in their national or tribal character, and not as individuals.

But we have no hesitation in saying that their *status* is not, in the face of the facts we have stated, to be determined solely by the circumstance that some officer of the Government has appointed for them an agent, even if we could take judicial notice of that fact suggested to us in argument.

It is true that the Supreme Court of the United States, abiding by the rule to decide nothing but what is necessary to the judgment, did not declare that the Pueblos were citizens of the United States and New Mexico; but the opinion leaves but little doubt as to what the decision of that court will be when the direct question arises there. Nevertheless, there can be no objection to an act of Congress declaring specifically that the enjoyment of all the rights of the citizens of the United States should be accorded to the Pueblo Indians; but when this is done, it should not be with the exception, any more than in the case of the allottees, that the children of the Indians, nevertheless, may be compelled to attend the Indian school prepared and supported from a fund for the education of the Indian tribes.

TERRITORIAL GOVERNMENT FOR FIVE CIVILIZED TRIBES.

Whether the time has arrived for the passage of an enabling act whereby the five civilized tribes may form either a territorial or state government, and be represented on the floors of Congress, no suggestion is made at present, except to say that a matter of this national importance might be better left to the consideration of Congress, at the discretion of the President. Such action would so greatly affect other interests than those of the Indians immediately concerned, that its determination belongs rather to the domain of national politics than to that of departmental administration and recommendation.

LANDS FOR SCHOOL SITES.

Under the act of Congress approved August 19, 1890 (26 Stats., 358), there was purchased, near the village of Flandreau, Moody County, S. Dak., on the 30th of March, 1891, for an Indian industrial school site, 160 acres for the sum stipulated in the appropriation, \$2,000; and for the Indian school at Lawrence, Kans., there was purchased for \$9,608 two parcels of land, described in the Commissioner's report as containing 153.60 acres and 9.54 acres, making a total of 163.14 acres.

Under the Indian bill approved March 3, 1891 (26 Stats., 1013), Congress appropriated the sum of \$6,000 for the erection of buildings and improvements at Phoenix, Ariz., and a site was obtained for the sum of \$9,000, near the capitol, for which a deed has been duly executed, together with two water-right certificates in the Grand Canal. The citizens of Phoenix have contributed \$3,000 of this amount, and thus the total cost to the Government has been but \$6,000.

Under the act of February 16, 1891 (26 Stats., 764), appropriating \$75,000 for the purchase of sites for Indian training schools, to be located outside of any Indian reservations wherein Indians are located under an agent, there have been selected the following:

In Minnesota; on the Pipestone Reservation, Pipestone County.

In Michigan; near Mount Pleasant, in Isabella County.

In Wisconsin; near Tomah, in Monroe County.

INDIAN CESSIONS AND INDIAN COMMISSIONS.

The public land transferred from uselessness to cultivation through treaties made between the Indians and the United States has been acquired by the effective agency of various commissions, some of which are still in the field.

CHEROKEE COMMISSION.

The labors of this commission have been set forth in the first part of this report.

THE CHIPPEWAS IN MINNESOTA.

The Chippewa Commission, mention of whose labors was made in the last annual report, has recently been reorganized and headquarters removed from St. Paul to Detroit, Minn., nearer the field of operations. Hon. Darwin S. Hall, of Minnesota, was appointed a member of the commission in May last, vice Hon. Henry M. Rice resigned, and is its present chairman. Mr. Whiting has been superseded by Francis Campbell, of Wisconsin, who has also been designated as disbursing officer of the commission. These are the only members of the commission on active duty and under pay.

The act (25 Stat., 642) under which the commission is operating provides for the removal and settlement of all the Chippewa Indians in Minnesota, except those of the Red Lake Reservation, to their permanent settlement on the White Earth Reservation. Any individual Indians, however, who may elect to take allotments on the reservations where they resided at the time of acceptance of the provisions of the act, are privileged to do so. The removal of such of the Indians as will go to the White Earth Reservation and their settlement thereon is the main object now to be accomplished. When the removal shall have been effected, allotments will be made to such as elect to remain upon the reservations where they now reside. Only about four hundred of the Indians have thus far been removed, but it is hoped and believed that another year will see the work of the commission far advanced toward completion.

The four townships of pine land in the northeastern portion of the White Earth Reservation which were ceded to the United States by the Chippewas have been surveyed into 40-acre tracts, and examiners have recently been instructed as to their duties in examining and listing the pine under the fourth section of the act.

Extensive surveys have been made on the ceded lands of the Red Lake Reservation, with a view to their classification, allotment, and disposal, as required by the act; and surveys are also being made on the diminished Red Lake Reservation for the purpose of making allotments to the Indians.

NORTHERN CHEYENNES.

Under a provision therefor in the Indian appropriation act of August 19, 1890, a commission, of which Maj. Gen. Nelson A. Miles, U. S. Army, was chairman, was appointed to conduct the necessary negotiations for the removal of the Northern Cheyenne Indians on the Tongue River Reservation, in Montana, and those on the Pine Ridge (Sioux) Reservation, in South Dakota, to a permanent settlement upon any of the existing reservations.

This commission first visited the Pine Ridge Agency, where about 537 of the Northern Cheyennes resided, and found the Sioux Indians there perfectly willing that all of the Northern Cheyennes should be brought to that reservation; but the commission expressed fears that this willingness was prompted by a desire of the Sioux to increase their strength and importance, and reported that in their opinion the sooner the Northern Cheyennes were separated from the Sioux the better.

They then proceeded to the Tongue River Agency, Mont., where about 800 of the Northern Cheyennes resided on and in the vicinity of the Tongue River Reservation, and found that bad feeling, want of confidence, animosity, and fears existed between them and the neighboring whites; that the Indians were attached to their present homes, were opposed to removing to Pine Ridge, wanted the Northern Cheyennes at Pine Ridge united with them; desired that a piece of the Crow Reservation adjoining theirs should be secured to give them sufficient lands, and that white settlers now within their reservation be removed therefrom.

The commission next visited the Crow Agency and reported finding the Crow Indians peaceable and prosperous, but bitterly opposed to giving up any part of their reservation for the Northern Cheyennes, with whom they wished to have nothing to do.

They then went to the Fort Keogh military reservation, in Montana, about 50 miles from the Tongue River Agency, where they found 250 of the Northern Cheyennes, comprising those enlisted in the U. S. Army, with their families. They considered the conditions of this reservation as suitable for these Indians, and recommended that those at Pine Ridge be removed thereto, expressing the belief that if these bands were again placed under *military control* the principal part, if not the whole number, would soon be united on that reservation, and that all would become industrious, quiet, peaceable, and self-supporting.

The Indian Commissioner, in commenting upon the report of the commission, expressed regret that the recommendations did not present a satisfactory solution of the questions that were the subject of negotia-

tions. The very brief time given by the commission to its duties was perhaps insufficient to secure the consideration either of the business that its importance demanded by the commission itself, or by the Indians, who think and act slowly.

After the troubles of last winter among the Sioux Indians had been brought to a close, it was urged by Major-General Miles and by the War Department that it was a military necessity to remove the Northern Cheyennes at Pine Ridge from that place to the Fort Keogh Reservation in Montana, and it was done by the military authorities; the Indians so removed being placed under the charge and management of Captain Ewers, of the Army, the Indian Office reimbursing the War Department for the expenditures made for their support. The contentment and prosperity prophesied did not follow. The Indians so removed soon became dissatisfied at Fort Keogh, and desired to be moved to the Tongue River Reservation. These wishes were seconded by the recommendations of Captain Ewers, and the business was taken up by the

PINE RIDGE AND ROSEBUD COMMISSION.

There had grown up also disputes and discontent among the Sioux in South Dakota as to boundary lines between Pine Ridge and Rosebud agencies and other matters there that demanded early consideration. Appropriation was accordingly provided by Congress in the Indian appropriation bill, approved March 3, 1891, as follows:

For this sum, or so much thereof as may be necessary to enable the Secretary of the Interior, by negotiation, to adjust all differences between the Indians on the Pine Ridge and Rosebud reservations in South Dakota in reference to the boundary lines of said reservations, their rations, annuities, and interest in the principal and interest of the permanent fund and to make such an arrangement with the Indians drawing rations on the Rosebud Reservation as will be satisfactory to them, by which those of the Lower Brule Indians who desire to do so may take lands in severalty upon the Rosebud Reservation south of the White River, six thousand dollars.

In accordance with this authority a commission, consisting of Messrs. Charles E. Pearce, A. R. Appleman, and George H. Harries, was appointed by the Secretary to carry into effect the purposes of this act. The instructions directed that the Commission should also negotiate with the band of Cheyennes, removed as a military necessity from Pine Ridge, and who yet retained valuable interests there.

The Northern Cheyennes at Fort Keogh were visited, both to secure their consent to the negotiations concerning the boundary and other matters in which they were interested, and to learn their desire as to a future location. The Indians were found anxious to get away from Fort Keogh and to be removed to the Tongue River Reservation. The Commission earnestly recommend this removal, and an extension of the eastern boundary of the reservation to the west bank of the Tongue River, the United States purchasing such lawful rights of white settlers as may be found necessary.

The Secretary of War, who was on a tour visiting military posts, gave this matter his attention when at Fort Keogh, and in September reported that Fort Keogh was not the place for the Indians, and strongly recommended their removal to the Tongue River Reservation.

Upon consideration of these several recommendations, you gave direction on September 14 for the removal of the Indians from Fort Keogh to Tongue River, and this was promptly carried into effect, restoring these Indians from the temporary charge of the military authorities to the management of the Indian Bureau.

The Commission adjusted the differences between the Sioux on the Pine Ridge and Rosebud reservations, and did other valuable work that will be presented in a separate report.

FLATHEADS REMOVAL FROM BITTER ROOT VALLEY, MONTANA.

The appropriation of \$5,500 made at the last session of Congress for the removal of the Charlot Band of Indians from the Bitter Root Valley to the Jocko Reservation in Montana, did not become available until July 1, 1891, and during that month Gen. Henry B. Carrington, who had made the appraisalment of their patented lands and secured their consent to remove, was appointed special agent and proceeded to effect their removal. This was authorized by act of Congress approved March 2, 1889, "to provide for the sale of lands patented to certain members of the Flathead Band of Indians in Montana Territory, and for other purposes." Upon sale of the lands, proceeds are to be paid in cash to the allottees by the Secretary of the Interior or expended for their benefit. Any Indian qualified, actually residing upon and cultivating any portion, was to be permitted to remain and pre-empt the land without cost to an amount not to exceed 60 acres.

Charlot, the chief of the Flatheads, is a man of great intelligence and elevated character. He had suffered, he believed, some personal injustice in former negotiations and reports, and it was with difficulty he was induced to enter upon any new councils. But having finally bestowed his confidence upon the special agent, the business was soon disposed of. The consent of each patentee was regularly secured, either in person or, in proper cases, by guardian. The lands and improvements were appraised and the report of all the proceedings duly made by the special agent, dated January 29, 1890, was transmitted to Congress by the President February 24, 1890 (Senate Ex. Doc. No. 70, Fifty-first Congress, first session).

The Commissioner of the General Land Office, under the direction of the Secretary of the Interior, offered these lands for sale as provided by law. On October 5, 1891, four tracts were sold and the sale was continued to the 19th. It has since been postponed for want of bidders, and will be offered at the land office at appraisalment value.

As by the act authorizing the sale the land can not be sold for less than the appraised value, sales of the larger part may not occur for a

year or more, owing to financial conditions and other circumstances there now preventing. Believing this value to have been justly appraised, the Secretary has refused to allow the lands to be sold at a less figure.

Nevertheless, the whole tribe under the lead of Charlot made ready to remove to the reservation, and it was deemed best they should be allowed to go. Indeed, they had so completely prepared before any notice to the Department, by giving up their former homes, that there was no alternative.

The Bitter Root Valley is described by those familiar with it to be one of the most attractive and lovely in our country. The high mountains on either hand supply it with the clearest and coolest streams, and the soil under ordinary irrigation bears grain, grasses, and fruits in abundance and perfection. The climate is most healthful, and here this tribe for many years lived in peace and comparative comfort. The Jocko Reservation is, however, also good land, and well watered, and as the new state, Montana, demands as much fertile soil as can be found available in its borders, the retirement of the Indian seemed desirable, particularly under the provisions of the law above stated.

The departure of this famous Indian tribe to a new home was full of interest, and is thus described by Special Agent Carrington, in a letter to the Secretary, dated at Missoula, Mont., October 21, 1891:

A remarkable incident will show the inner confidence of Charlot in the Government. Just outside of the agency inclosure is the Catholic church. As the column drew near, the "Banner of the Sacred Heart," was upheld by two men, and the priest conducted a procession of men, women, and children, who were dismounted for the purpose, into the church, where a service was held.

The Indians, of their own volition, had borne the "Stars and Stripes" on the center wagon. The mounted men came down the slope to the agency with a "good front," the flag in the center, firing their guns in the air.

When formed by the priest under the "Banner of the Sacred Heart," Charlot (chief) stepped to the wagon, spliced the flag stick with a cane, bore it to the front, and planted it at the church entrance, where his warriors placed their guns. "He wanted the flag which protected his people to be with them all the time." It was done so promptly and with an instinct so happy that it reveals the trust he felt in our good faith. Vandenburg did not dismount his party, "they were so tired and hungry."

On the march, herding, packing, unpacking, striking lodges, and all details were done as prearranged. No regiment could have more implicitly obeyed every order. Even fence rails were sacred, cold and wet as our march was. Tepees were pitched as a street, in two lines, so that the whole camp was under my eye constantly. Every lodge was visited from time to time, so that there was no chance of scattering or confusion.

There were many scenes and incidents of even thrilling interest in this exodus of the Flatheads from their ancestral home. The old people wept, but felt that "they could trust the Great Father at Washington," and "all would be well."

It will be observed that this removal has thus preceded the sale of the land, and the winter will pass before frequent sales can be made. The Indians have been assured that they will be cared for on the reservation, and it is earnestly recommended that an appropriation of

\$10,000 be requested for their support. It would have been a mere abandonment of the guardianship of the government to have allowed the sale of the lands at what they would fetch, regardless of the appraisement. The Indians removed on the faith that their departure from the reservation was what the United States chiefly desired, and that they could go at once with safety. In this they should not be disappointed.

TURTLE MOUNTAIN BAND, NORTH DAKOTA.

Under a provision contained in the Indian Appropriation act approved August 19, 1890 (26 Stat. 354), a commission was appointed consisting of A. H. Mahone, of Charleston, W. Va., William Haynes, of South Bend, Ind., and Isaac Fennimore, of Mount Holly, N. J., to negotiate with the Turtle Mountain band of Chippewa Indians in North Dakota for the relinquishment to the United States of whatever right they may have in all lands in said State to which they claim title; and for their removal to the White Earth Reservation, or any other lands reserved for the Chippewa Indians in the State of Minnesota, if sufficient lands should be found for the purpose; and for negotiating for the consent of the Chippewas in Minnesota to such settlement of the Turtle Mountain band of Indians.

The commission made report February 9, 1891, stating that there were not sufficient lands on the White Earth Reservation for those Chippewas residing there and others who are expected to remove from the various reservations in that state, under the Chippewa act of January 14, 1889 (25 Stat., 642); and that the Red Lake Indians were indisposed to consider the question of allowing the removal of the Turtle Mountain band to their reservation, because scarcely two-fifths of it was fit for cultivation, and they wanted it all for themselves and their children.

The Turtle Mountain band of Indians reiterated their desire to stay where they now are and have a larger reservation set apart for them and then sell the territory claimed by them outside of such enlarged reservation.

The commission conclude their report with, in substance, the following suggestions:

(1) That these Indians should be encouraged to seek employment among the whites, drive teams, cut wood, hay, etc. (2) That the young men should be enlisted in the army. (3) That they should engage in stock raising in connection with the cultivation of the soil. (4) That the extension of the present reservation, if made, should be to the westward so as not to interfere with the town of St. John to the north, the town of Rolla to the east, and the numerous white settlers who have cultivated farms south of the reservation. (5) That the Indians prefer an extension of the present reservation and temporary annuity support of from \$50,000 to \$100,000. (6) That a home might perhaps be found for them bordering on Lake Superior north of the city of Duluth and ex-

tending to the British Possessions; poor lands, but where game and fish are abundant.

The work of taking the census of these Indians, assigned to this Commission, appears to have been delegated to "enumerators." The summary of the census reported is as follows:

Full-blood Indians on the reservation.....	278
Mixed bloods on the reservation.....	1,289
Mixed bloods in vicinity of reservation.....	760
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Total on and off the reservation:	
Full-blood Indians.....	278
Mixed bloods.....	2,049
Grand total.....	2,327

The Commission reports no negotiations whatever concerning the claim of this band to a large area of lands in the state of North Dakota. The Indians themselves, however, are pressing upon the government for adjustment of a claim they set up to a large tract of country there north of Devil Lake, embracing something like nine or ten million acres. Little Shell, chief, has presented to the office a request that a portion of the former Great Blackfeet Reservation, on the north side of the Missouri River above the mouth of White River, a tract of land 30 miles long and 25 miles wide (about 483,840 acres), be set aside for a reservation for the band under the cessions made by the agreements ratified by act of May 1, 1888. (25 Stat., 113.)

Through Mr. J. B. Bottineau, their attorney, they also have requested an extension of their present reservation westward, so as to make in all 446,670 acres.

It is not recommended, however, that the reservation requested by Little Shell should be made, or that the present reservation should be extended as urged by Mr. Bottineau. There are only 278 full blood Indians on the present reservation of two townships, and that ought to be sufficient land for them. The heads of families of mixed bloods of the Chippewa Indians were by the treaty of 1863 granted in fee 160 acres of land. Many of that class now living among the band are, no doubt, the descendants of those thus provided for, and many others are doubtless of foreign nativity. None of them have any such claim upon the government for land as to make a reservation for their benefit necessary. If they are entitled to land from the government, they should take allotments on the public domain and earn their own support, which it is believed they are abundantly able to do, but which they are not likely to do if provided with a reservation.

They are not by treaty or otherwise entitled to any appropriation of money by Congress, but \$75,457.50 have already been spent, under appropriations made, for their support and civilization. It is deemed that from one hundred and fifty to two hundred thousand dollars, in addition to what has heretofore been expended for their benefit, would

be a fair and reasonable basis of adjustment for a relinquishment of their claim. Whatever amount may be allowed therefor would do more good if expended in annual installments for their benefit, and it should be expended for the benefit of the full blood Indians belonging to the Turtle Mountain Reservation. Their claim is not of such value as to warrant the payment for relinquishment of it of any considerable sum of money, or the recognition of any exorbitant demands set up by them therefor.

What to do with the 278 full-blood Indians on the Turtle Mountain Reservation does not at present seem so clear. It is not considered, however, that it would be for their welfare, or for the interests of the government, that they should remain on the present reservation, so near the international boundary line. When all the Chippewas of Minnesota—those now on the White Earth Reservation as well as those who are entitled to move there—shall have taken allotments thereon, probably sufficient land will remain to accommodate this small band. Many of the Indians entitled to move to the White Earth from the other reservations in Minnesota will no doubt, under the right reserved to them in the act of January 14, 1889, elect to remain on the reservations where they now are. At least that seems to be their disposition, so far as the Department is informed at present. The Chippewa Commission is now engaged in adjusting the affairs of the Chippewas in Minnesota under the act last referred to, and it is to be hoped that the progress of the work will be such that the Department will at no distant day be better informed as to the probability of accommodating the Turtle Mountain band of Chippewas upon the White Earth Reservation; or if this may seem too indefinite in time, it would do to place them on the Fort Peck Reservation, in Montana, and give them allotments in severalty, with intermediate subsistence.

MISSION INDIANS IN CALIFORNIA.

The President approved, January 12, 1891, the act entitled "An act for the relief of the Mission Indians in the State of California" (26 Stat., 712). This legislation has been long sought for, and its provisions were carried into effect without delay. A commission was appointed, consisting of A. K. Smiley, of Redland, Cal., deeply interested in the Mohonk conferences for benefit of the Indians; Joseph B. Moore, of Lapeer, Mich., a lawyer of distinction; and C. C. Painter, connected with the Indian Rights Association. It entered upon its duties under Department instructions of January 31, 1891. After a short time Mr. Smiley and Mr. Moore asked to be relieved for the summer, and the work was left in charge of Mr. Painter. He has had the assistance of Mr. Frank D. Lewis, who was appointed by the joint action of the honorable Attorney-General and the Secretary of the Interior, under a special law, to look after and enforce the rights of these Indians.

The work has not progressed very rapidly; but it is hoped the fair field for humane work here presented will soon be fully occupied by the Commission, and the beneficial purposes of the government attained. The land interests of these Indians, so long entangled and embarrassed, should be brought to a successful and early adjustment, under the operation and execution of this law, by an intelligent, self-sacrificing, and comprehensive prosecution of its duties by the Commission.

ROUND VALLEY RESERVATION IN CALIFORNIA.

Another important but long-delayed measure of legislation necessary to relieve the Indian service of embarrassment was enacted by the last Congress, on October 1, 1890, providing for the reduction of the Round Valley Indian Reservation, in California, and for other purposes. In pursuance of the provisions of this act, a commission was appointed consisting of D. W. Shryock, of Greeneburg, Pa., Luther R. Smith, of the Interior Department, and Henry C. Hunt, of North Carolina, and, under instructions of November 3, 1890, proceeded to the reservation to make appraisement of certain agricultural lands within its limits, with the improvements thereon; to select a reasonable quantity of grazing and timber lands to be used by the Indians in common or allotted in severalty, as the President may determine, and to appraise the value of certain other improvements made by private persons or firms upon lands within the reservation. This Commission has submitted its report and findings upon these matters, and the same are now in process of execution. It is hoped that the lands within the reservation will soon be allotted in severalty to these Indians, who are able, if given a fair chance, to fully earn their own support.

WARM SPRINGS RESERVATION IN OREGON.

The determination of the correct location of the northern line of the Warm Springs Reservation, in Oregon, was made the subject of investigation by a commission authorized to be appointed by a clause in the Indian appropriation act of August 19, 1890 (26 Stat., 355), which directs that the Commission shall report their conclusions upon the subject to the Secretary of the Interior. The Commission appointed for this purpose consisted of Mark A. Fullerton, of Colfax, Oregon; William H. H. Dufur, of Dufur, Oregon; and James F. Payne, of Alma, N. C. The Commission has submitted its report, and presents the following as its findings:

It is therefore considered and declared by the Commission that the northern boundary of the Warm Springs Indian Reservation, in the State of Oregon, is that part of the line run and surveyed by T. B. Handley in the year 1871 from the initial point up to and including the twenty-sixth mile thereof, thence in a due west course to the summit of the Cascade Mountains.

The report of this Commission will be submitted to you for further *action*.

COLVILLE RESERVATION.

The provision of law for the appointment of a commission for the investigation of the matter of the Warm Springs Reservation boundary line provides that the same commission be directed to proceed to the Colville Indian Reservation, in the state of Washington, to negotiate with the bands of Indians on the Colville Indian Reservation, in Washington, for the cession of such portion of the reservation as the Indians may be willing to dispose of, that the same may be opened to white settlement. Under instructions from this Department, the commission discharged this branch of its duties, and on June 8, 1891, submitted its report, transmitting an agreement whereby these Indians cede to the United States about 1,500,000 acres from the northern half of their reservation for a consideration of \$1,500,000, to be paid in five equal annual installments for distribution per capita among the Indians entitled thereto, with certain other provisions for their interests. The report of the commission, their proceedings, and the agreement negotiated will be submitted to you for transmission to Congress.

PUYALLUP INDIANS.

A commission consisting of Hon. Charles D. Drake, of Washington, D. C.; George B. Kinkead, of Lexington, Ky.; and B. F. Harness, of Kokomo, Ind., appointed under a clause in the Indian appropriation act of August 19, 1890 (26 Stat., 354), proceeded, under instructions of the Department of October 4, 1890, to the locality where these Indians reside, adjoining the city of Tacoma, in Washington, and investigated the land and other matters referred to in the law authorizing the commission. A report has been submitted by the commission, which, in accordance with the law on the subject, will be laid before you to be communicated to Congress. The interests to be affected by this report are great, and the questions discussed are important and difficult. It is therefore deemed best to consider them solely in connection with the report itself.

SHOSHONE COMMISSION.

This commission was formed under Indian appropriation act approved March 3, 1891 (26 Stats., 1009), which was to enable the Secretary in his discretion to negotiate with any Indians for the surrender of portions of their respective reservations, subject to ratification by Congress, and instructions were approved on July 14, 1891. The commission—composed of the following-named persons: J. D. Woodruff, Lander, Wyo.; Charles H. Merillat, Washington, D. C., and J. H. Brigham, of Wauseon, Ohio—met at the Shoshone Agency, Wyoming, on the 2d of last August, and the report is now in due course of preparation. It is understood that the negotiations conducted by this commission for the surrender of a portion of the Shoshone reservation have been successful and made upon very equitable terms.

PYRAMID LAKE COMMISSION.

This commission was formed by the Secretary also under the act of March 3, 1891, just mentioned, with due instructions. It consists of the following persons: Ebenezer J. Ormsbee, of Brandon, Vt.; Cyrus Beede, of Oskaloosa, Iowa; and William A. Morgan, of Cottonwood Falls, Kans., who met on the 28th of last August, at the town of Wadsworth, Nev. The report has not yet been submitted, nor is it definitely known what have been the recommendations made, but it will be ready and presented soon.

NAVAJO COMMISSION.

A third commission under the same act has been formed to treat with the Navajo Indians of New Mexico. The members are: Brig. Gen. Alexander McD. McCook; John L. Barstow, Shelburne, Vt.; John H. Hammond, of San Francisco, Cal. Owing to the lateness of the season when it was deemed best to establish the commission, on recommendation of Gen. McCook, it will not take the field before spring.

CHIPPEWA AND MUNSEE RESERVATION IN KANSAS.

The Commissioner in his report calls attention to the condition of the affairs of the Chippewa and Munsee, or Christian Indians, of Kansas, and recommends that, in view of their condition and the fact that under the general allotment act of February 8, 1887, they were made citizens of the United States, that Congress be asked to grant authority to issue patents in fee to the allottees of the several tracts, or their assigns, and that such lands as are vacant or abandoned, including their school and mission lands and the tract on which the schoolhouse was located, be appraised and sold by the Commissioner of the General Land Office, the net proceeds arising from the sale to be funded for the use and benefit of those members of said tribes born since the allotments were made, or who never received an allotment. This is recommended to your favorable consideration.

MEDAWAKANTON BAND OF SIOUX IN MINNESOTA.

The Commissioner sets forth the lands purchased for these Indians and the several acts of Congress authorizing the same, and gives the reason why the same have not been subdivided and allotted to individual members of the band, as it is intended shall be done.

THE "GHOST DANCE" AND SIOUX TROUBLES.

Prior to the close of the fiscal year 1890 there began to appear among a few of the Indian tribes some excitement growing out of, chiefly, a superstitious belief and expectation by them of the coming of an Indian "Messiah," expression whereof was given by the "ghost dance." The

excitement spread quite rapidly among the wilder Indians. Such belief is, to Indians, however, not a new thing, and indulgence in dances of various names has continued among them. Therefore from this dance at first no serious disturbances were anticipated, but out of abundance of caution precautionary steps were taken, from time to time, to prevent any possible trouble. The excitement, however, gradually became threatening among the great Sioux tribe, located in North and South Dakota. As early as May 29, 1890, the Department was informed from unofficial sources that the Sioux, or a portion of them, were planning an early outbreak.

The Indian agents there under instructions investigated the matter and reported that no grounds existed for apprehension. But the Rosebud agent also reported that secret communications were passing among dissatisfied and non-progressive Sioux who had refused to sign the agreement with the government authorized by act of March 2, 1889, and proclaimed by the President of the United States February 10, 1890. The agent at Standing Rock Agency also stated that there were a few malcontents there, who held tenaciously to the old Indian ways and were ever ready to sow dissensions and discourage the progressive Indians, but that only a very few of the Sioux could be possibly united in attempting any overt act against the government. He represented that the removal from among them of "Sitting Bull" and a few other leaders of disaffection would prevent any anticipated trouble. The agent at Cheyenne River stated that some little excitement existed among the Indians of that agency regarding the coming of an Indian "Messiah;" and the agent at Pine Ridge referred to excitement among the Indians of that agency caused by the reported appearance of a "great medicine man" in the north. But this agent thought this would soon and peaceably die out.

Further investigation and reports were, however, required of the agents as to the causes of dissatisfaction and as to what additional precautions were desirable. The agent at Pine Ridge stated in a report to the Indian Office, dated August 28, 1890, that the visit of the Sioux Commission to the agency in 1889, and the large reduction in the quantity of beef issued for that year, caused a great deal of bad feeling there, and had resulted in prejudice against the Commission and a feeling of indifference as to the future; that the Indians were much influenced by the report which reached them in the spring of 1890 that a "great medicine man" had appeared in the Wind River country, Wyoming, who would resurrect the departed heroes of the tribe, restore the buffalo, bring confusion upon the whites, causing them to flee from the country, etc.; that on August 2, 1890, about 2,000 Indians congregated at a point on the reservation to hold a religious dance, connected with the appearance of this wonderful being; that the Indian police were unable to disperse the meeting, and that the agent then visited the grounds, but the Indians, on hearing of his approach, dispersed before his arrival, with the

exception of several "bucks," who stood stripped for fight, with Winchester rifles in their hands, prepared to die in defense of their new faith. These were finally quieted.

About this time the other Sioux agents reported that excitement and uneasiness of the Indians on reservations under their charge were growing, and upon report and recommendation of the Acting Commissioner of Indian Affairs, the Department requested the Secretary of War to instruct the proper military authorities to be on the alert to thwart any evil designs of the Sioux, and to cause the removal and imprisonment, at such time as such authorities might think best, of "Sitting Bull" and some other disaffected leaders among these Indians.

As Maj. Gen. Miles, U. S. Army, in his capacity as a member of the commission to negotiate for the removal of the Northern Cheyenne Indians, was *en route* to the Pine Ridge Agency, the agent there was instructed, October 18, 1890, to consult with and explain to him the situation, and seek his advice as to the wisdom of calling for troops. The agent reported he did as directed, and Gen. Miles advised him that, in his opinion, the excitement would soon die out. The Indians, however, the next day in council declared that they would not cease the "ghost dance." Subsequently, upon receipt of information from the Sioux agents that the attitude of the Indians was becoming more threatening, full report of the situation was presented to you by this Department, and under date of November 13, 1890, you directed the Secretary of War to assume a military responsibility for the suppression of any threatened outbreak.

Upon a telegram from agent Royer, at the Pine Ridge agency, that protection to employes and property on that reservation had become absolutely necessary, a military force under Gen. John R. Brooke, upon request of this Department, was dispatched to the agency, arriving there November 20, 1890. The presence of the troops seemed for a time to have a subduing effect upon the Indians.

On December 1, by your direction, the following instructions were transmitted to all the Indian agents in the Sioux country:

During the present Indian troubles you are instructed that, while you shall continue all the business, and carry into effect the educational and other purposes of your agency, you will, as to all operations intended to suppress any outbreak by force, coöperate with and obey the orders of the military officer commanding on the reservation in your charge.

On December 12, 1890, the commanding officer at Fort Yates, N. Dak., under orders from Maj. Gen. Miles, was instructed, without consultation with this Department, to secure the person of "Sitting Bull," and to call on agent McLaughlin, of Standing Rock, for coöperation and assistance, if necessary. The agent, acting under instructions of the military authorities alone, sent some 40 Indian police to Sitting Bull's camp, where they arrived about daybreak on December 15, 1890, the troops following at a distance. The police entered "Sitting Bull's"

cabin and arrested him without resistance; but while dressing himself he became abusive, refused to go with the police, and called upon his followers to rescue him, one of whom shot the lieutenant in command of the police force, who, in turn, shot "Sitting Bull," who also received another shot and was killed outright. The firing then became general. Four policemen were killed outright, and 2 died afterwards from wounds received. "Sitting Bull's" followers lost 8 killed and several wounded, and the others of his supporters fled, leaving their families and dead behind them. Two troops of United States cavalry arrived on the scene immediately after the fight and took possession of the camp.

The hostile element of the different reservations thereupon soon commenced concentrating in that region known as the "Bad Lands," upon and in the vicinity of the Pine Ridge Reservation, and that reservation became the central point for the Sioux troubles, which culminated at Wounded Knee Creek, Pine Ridge Reservation, on December 29, 1890, in the attempt of a portion of the Seventh Cavalry, under Col. J. W. Forsyth, and other troops, to disarm Big Foot's band, consisting, as reported, of some three or four hundred Indians, who had previously surrendered to the military. The fight was of short duration. One officer and 24 enlisted men were killed and 3 officers and 32 enlisted men were wounded, and 128 Indians were killed and 33 wounded; the killed being 84 men and boys, and 44 women and 18 children.

The excitement caused by this engagement made necessary the concentration of a stronger military force, during which Lieut. E. W. Casey, of the Twenty-second Infantry, commanding a company of Northern Cheyenne Indian scouts, was killed. His slayer, Plenty Horses, was afterwards tried in the United States court, upon the charge of murder, and was acquitted upon the ground that the act was done in warfare.

An unfortunate affair occurred about January 11, 1891, which excited the Indians very much and had a strong tendency to retard their pacification. This was an unprovoked attack from ambush upon a hunting party of Sioux Indians, in Meade County, S. Dak., and outside the limits of the Pine Ridge Reservation, in which the Indian, Few Tails, was killed and two Indian women wounded. Five white men were indicted and tried in the state court at Sturgis, S. Dak., upon the charge of having murdered Few Tails. The United States district attorney aided in their prosecution. The result was their acquittal, in July last.

The hostile Indians submitted to the military, and in January last these Indian troubles practically ended. Soon afterwards an influential delegation from the different Sioux agencies visited Washington, and was given an audience by the President and had full conferences with the Secretary of the Interior and the Commissioner of Indian Affairs relative to their rights and grievances.

Subsequent rumors coming to the Department, indicating that the Sioux contemplated a renewal of trouble, have proved upon investigation to have no foundation in fact, although some factions among the

Indians have undoubtedly continued sullen and dissatisfied. No doubt a few idle and vicious Indians have since the surrender, and will hereafter, indulge in insubordinate conduct and utterances; but the Sioux as a body seem quite well satisfied with their present treatment and condition.

After a careful consideration of the matter, the opinion seems to be verified that the turbulence was due to a variety of causes, which may be summarized as follows:

(1) The fact that they were warlike Indians and had a record of victory in battle under "Sitting Bull."

(2) The excitement growing out of the "Messiah craze."

(3) A feeling of unrest engendered by factional opposition by the leaders of the non-progressive element to the act of 1889 for the reduction of the Great Sioux Reservation.

(4) Failure to receive, through want of appropriations by Congress, fulfillment of promises made by the Sioux Commission. This failure greatly discouraged those who signed, and intensified the opposition of those who refused to sign.

(5) Dissatisfaction because of the statement that their agreement under the act named prevented the transfer of a band of Indians from the Rosebud to the Pine Ridge Agency. The location of this band that had drawn rations at Rosebud fell, under the agreement, within the Pine Ridge diminished reserve, and the law declared that to be the place for drawing their rations.

(6) Failure of crops for 1889 by neglect, and for 1890 by reason of serious drought.

(7) Diminished appropriations for their subsistence and failure of rations improvidently used issued after short crops.

(8) Delay in appropriation until August 19, 1890, providing for the Indians, and preventing Indians from engaging in their usual employment of freighting supplies during the summer and fall months.

Other causes doubtless may have contributed, but those enumerated are believed to have been the chief.

In behalf of the Indians, however, it must be said that they exhibited no strong desire to escape from their reservation; that they killed no women or children during the trouble anywhere, and, with the exception of Lieut. Casey and the soldiers killed at the fight at Wounded Knee Creek and in the vicinity of the Pine Ridge Agency, they killed only one other white person—an employé of the agency herding beef cattle. Their depredations off the reservation were inconsiderable, if any. They did not go upon the "warpath" in the usual and aggressive way of Indians generally, and of the Sioux in particular. The councils and efforts of much the larger portion of the tribe were for peace, and they rendered good service in persuading their turbulent brethren to submit to the authority of the United States. They were held in check, undoubtedly, by the influences of civilization, which had been brought

to bear upon a large number of them by the work of the schools, by the practical training to industry, and by the labors of the faithful missionaries and religious institutions established among them. Christianity, education, and industrial discipline, with an intelligent appreciation by many of the power of the United States restrained them more than arms.

SIOUX LANDS AND THEIR FUTURE.

The conditions surrounding these Indians render it unwise to require them to devote their efforts at self-support exclusively to tilling of the soil. The lack of rain and of the necessary facilities for irrigation in the region of country where they are located makes it apparent that their land is now more valuable for grazing than for agricultural purposes. It is stated in the report of the Commission that secured the consent of these Indians to the act of March 2, 1889, that in its opinion "the lands in the different reservations set aside for the Indians are mainly valuable for grazing purposes. Certain it is that by taking their lands by 'allotment in severalty,' the Indians should be permitted to take them as grazing lands."

This fact has long been recognized by the Department and by Congress—by the Department in the formation of legislation and agreements, and by Congress in the enactment of laws applicable to them. This will appear from an examination of the unratified agreement of 1882 and the act of 1889 (25 Stats., 888), to which they have given their consent. By section 17 of this act the Secretary of the Interior is authorized to purchase from time to time, for the use of the Sioux Indians, such and so many American breeding cows of good quality, not exceeding 25,000 in number, and bulls of like quality, not exceeding 1,000 in number, as in his judgment can be cared for and preserved, with their increase, by these Indians. The section provides, also, that each head of a family or single person of the age of eighteen years who shall have or may hereafter take an allotment of land in severalty shall be furnished with certain articles or implements necessary and useful in cultivating the soil.

Section 14 of that act authorizes the Secretary of the Interior, in cases where the use of water for irrigation is necessary to render the lands within any Indian reservation created by said act available for agricultural purposes, to prescribe such rules and regulations as he may deem necessary to secure a just and equal distribution thereof among the Indians upon such Indian reservations. Thus it would appear that Congress intends to encourage the Sioux Indians to engage to some extent in the habits of husbandry as well as in the business of stock-raising. The industry of stockraising among them can be encouraged and, at the same time, tilling the soil, which naturally follows the herding of flocks, persevered in. The two should, so far as possible, go hand in hand.

Some allotments are being made on the ceded portion of the great

Sioux Reservation, and upon the basis almost wholly of "grazing lands;" double quantity. The purpose and policy of the government is to allot these Indians on the diminished reservations lands in severalty, upon the basis of grazing lands as soon as they are prepared to take them. Some are already insisting upon allotments, and it is recommended that a liberal appropriation be made so that these may be made as extensively and rapidly as possible.

Purchase of a portion of the stock cattle authorized has been made, and the cattle distributed to those qualified. Many are already accustomed to the industry of raising stock, as appears by the fact that the government purchased last year from these Indians at two of the agencies on the Missouri River more than \$50,000 worth of cattle; and the Indians selling the cattle to the government received back a portion of the same beef as their ration prescribed by the agreement of 1877.

The possession of individual property will be a powerfully restraining force, from those commotions and conflicts usually incited by the idle and worthless at the cost of the worthy. Cattle that may be sold for money, and through which they will thereby gain a due reward for industry and thrift, will not be surrendered by their numerous Indian owners for the war feast or the savage commissary any more willingly or with less resistance than by white men. The conservative forces of trade and commerce are effective among all peoples who have advanced far enough to engage in them. Indeed, it may be said that every Indian that is led to self-support by any honorable occupation is receiving an education the most practical and immediately satisfactory that can be bestowed upon him.

THE DEFICIENCY IN SIOUX APPROPRIATION.

The Commissioner of Indian Affairs reports that by reason of the necessity for providing for sufficient subsistence supplies to issue to the Sioux Indians the full ration prescribed in the agreement of February 28, 1877 (19 Stats., 254), and as directed by the Department, to prevent suffering among those Indians, a deficiency of \$150,000 will be incurred in the appropriation for subsistence and civilization of the Sioux for the fiscal year 1892. The increased cost of the beef purchased for these Indians will occasion much the larger portion of this deficiency. It has been the practice heretofore to purchase under contract and to have delivered between July 1 and October 1 of each year, on the reservations where required, such quantity of beef as the appropriations would allow for issue to the Indians.

In the beef supply thus purchased and held on the reservation considerable loss occurs by death of some cattle, but more particularly by loss of flesh and consequent reduction of quantity and quality during the winter months when grazing is scarce and difficult in the severe *winters* of the latitude of the Sioux Reservations. As the cattle thus

reduced in flesh have heretofore been issued to the Indians for rations semi-monthly as of their average weight when purchased, of course the Indians have had to bear the loss occurring from shrinkage or otherwise. To avoid this, the contracts for the current fiscal year were made for *deliveries of beef monthly*, so that the issues may be made to the Indians of the full weight of the rations prescribed, which is by the agreement "a pound and a half of beef" net, equivalent to three pounds of beef gross, and consequently much higher prices have had to be paid therefor. The purchase of increased quantities of other supplies and at higher prices, constituting the prescribed ration, in order to make full issue thereof to the Indians, has helped to swell the deficiency.

DEVILS LAKE RESERVATION.

The Commissioner draws attention to the erroneous survey of Devils Lake Reservation, and shows that the appropriation on account of this survey is being gradually and correctly expended, under the direction of the Secretary, in the purchase of stock and agricultural implements, and in promoting the comfort and improvement of said Indians, as required by statute.

OF INDIAN SOLDIERS.

This Department has given every possible encouragement and help in the furtherance of the efforts of the War Department in the enlistment of Indians in the U. S. Army, which was begun early in the current calendar year, and quite a number of them have been recruited. Much good will result, no less to the Indians enlisted than to the peace and quiet of the settlements in the vicinity of the reservations, by enlisting the young men who would otherwise be idle, and possibly restless. In the Army, they can be usefully employed and trained under strict discipline. This also secures another means of self-support and of that practical education to habits of industry that is the broad road to the Indians' civilization and redemption.

The obedience and loyalty to duty exhibited by the Indian scouts employed at various times for service with troops engaged in subduing Indian disturbances and hostilities and generally preserving order indicate that they can be depended upon, when properly officered and drilled, to perform valuable service under the most trying circumstances, even among members of their own tribe.

GRAZING ON RESERVATIONS.

In the act of February 28, 1891, amending the general allotment act of February 8, 1887, provision is made for leases of allotments by allottees who from age or disability can not personally and with benefit to themselves occupy or improve their allotments, or any part thereof, under such terms, regulations, and conditions as shall be prescribed by the Secretary of the Interior, for not exceeding five years for farming and grazing purposes and ten years for mining purposes.

The section of law making this provision contains also the following:

Provided, That where lands are occupied by Indians who have bought and paid for the same, and which lands are not needed for farming or agricultural purposes, and are not desired for individual allotments, the same may be leased by authority of the council speaking for such Indians, for a period not to exceed five years for grazing, or ten years for mining purposes, in such quantities and upon such terms and conditions as the agent in charge of such reservation may recommend, subject to the approval of the Secretary of the Interior.

In pursuance of this law authority was granted on April 9, 1891, for the agent having charge of the Osage, the Pawnee, the Ponca, and the Otoe and Missouri Indians, they having expressed a desire to lease a portion of their lands for grazing purposes, to invite informal proposals for grazing for one year upon such lands within the respective reservations as would properly come within the limitations fixed by law. Grazing arrangements on such reservations were finally made for one year only for the reason that there was not then remaining sufficient time of the grazing season of the current fiscal year to secure proper competition upon which to base grazing leases for the full period allowed by law.

Some of the Indians, especially in the Indian Territory and in Oklahoma, had heretofore been suffered to enter into arrangements with white men for grazing cattle on their reservations. There was no law under which such grazing arrangements could be sanctioned by the Department and the attention of Congress was called to the subject. No general law was enacted giving legality to such use of the large areas of surplus land within Indian reservations, but on the contrary provision was made for a commission to negotiate with the Cherokees and with all other Indians owning or claiming lands lying west of the ninety-sixth degree of longitude in the then Indian Territory for the cession to the United States of all their title, claim, or interest of every kind or character in and to said lands.

Whatever may be said in behalf of the Indians who had bought and paid for their lands of the equity or justice of this law authorizing leasing of portions of the lands within their reservations for grazing and mining purposes, it can be seen that it is legislation calculated to obstruct the general policy which the United States has clearly indicated by authorizing the negotiations referred to and which have been steadily pursued for some time past of securing the consent of the Indians to take allotments of land in severalty and to cede their surplus lands to be opened to settlement. A law granting the Indians the privilege of letting their surplus lands for grazing purposes, by which a considerable revenue comes to the tribe, thus favored, for the common benefit of all belonging to it, is not calculated to advance the policy of tribal segregation, of individual allotments, of industrial habits and of the civilization of the Indians, nor to open to public settlement the unnecessary quantities of land now held within their reservations.

This provision of law was not submitted for the consideration of this

Department, and in view of the negotiations authorized and in progress the Department would not have been inclined to have given its approval to the enactment, especially as it will tend to embarrass and hinder such negotiations as are now being conducted by the Cherokee Commission. The sums paid by persons, or more frequently, corporations, securing such leases are comparatively small and are received by the head men of the tribe or council, and in large part applied to what is called the support of the tribal government; whereas if these extensive lands, now put to such poor use, were sold to the United States the proceeds would form an interest-bearing fund to be distributed to all the individuals of the tribe per capita, under the direction of the Indian Bureau. Besides, it is apparent that the policy of reducing Indian reservations and giving allotments in severalty has been so far carried into effect around about these poor remnants of tribes on the Cherokee Outlet that it will be impossible to perpetuate here the tribal conditions for the gain of a few white citizens without the demoralization of the Indians and their great pecuniary loss.

CROW RESERVATION, MONTANA.

Under the third subdivision of the agreement with the Crow tribe of Indians, ratified by act of Congress of April 11, 1882 (22 Stat., 43), the Crow Indians reserved to themselves the right to permit cattle to be driven across or to be grazed upon their reservation, the Secretary of the Interior to fix the amount to be paid by parties so desiring to drive or graze cattle, and the amounts accruing therefrom to be paid to the Indians, under such rules and regulations as the Secretary of the Interior may prescribe. The regulations for grazing on this reservation have been for a specified rate per head per annum for the stock grazed thereon. This plan has not worked satisfactorily for the peace and welfare of the Indians, nor in the amounts that should have been realized for such grazing privileges.

A different plan has been adopted, whereby the surplus lands of the diminished reservation have been marked off in districts as nearly as possible by boundaries consisting of natural and physical features of the country, and the grazing lands within these several districts have been advertised and let to the highest bidder and permit agreements made with them for the privilege of grazing lands within said districts. Five such permit agreements have been made, covering a period of three years from July 1, 1891. These agreements limit the number of cattle to be held within each grazing district and fix the rate to be paid for the number of acres of available grazing land therein. On this basis, the Indians will secure nearly \$30,000 per annum from the grazing of cattle on their surplus lands within their diminished reservation, whereas, under the former practice and system, the largest amount secured was about \$24,000 for grazing upon the reservation when it contained about 1,800,000 acres, more than is now within the diminished reservation.

With the exclusive right of the persons having the grazing permits to hold cattle within the districts covered thereby, conflicts with other cattle men and consequent annoyance to the office will be avoided. The results of this system will be, it is feared, however, but a poor substitute for that better policy of educating the Indian to live by his own labor. An uncivilized Indian with a comfortable income is even worse off than a demoralized white man in the same unfortunate condition.

CUTTING OF TIMBER ON INDIAN RESERVATIONS.

LA POINTE AGENCY, WIS.

Congress, by joint legislation, approved February 11, 1890 (26 Stat., 669), appropriated \$75,000 for purchasing goods and clothing for the Indians of the La Pointe Agency, to relieve their distress consequent upon denial of permission to them to cut and sell timber from their reservations until proper legislation on the subject could be had, said amount to be reimbursed to the United States out of the moneys thereafter realized from the sale of the land or timber of such of the bands of Indians as received the benefits of the appropriation.

The Indians declined to receive any goods or clothing if the money expended was to become a lien upon their lands or timber, and consequently the expenditure of the appropriation was not made.

It was reported that there were considerable quantities of dead and down timber on the Lac du Flambeau, Bad River, and Lac Court d'Oreille reservations, but as the Indians were not equipped for and not able to bank the logs that might be cut for sale from said timber, regulations were prepared and approved by the President for the cutting and sale thereof, under contracts with lumbermen to be made after due advertisement; but no bids were received, as it was claimed the quantity was so small and so scattered as not to encourage competition, and to make it difficult and expensive to handle the timber. The recent forest fires, however, have so greatly increased the quantity of dead timber that the agent in charge of the reservations under the La Pointe agency in Wisconsin reports that he is of the opinion that favorable bids for the purchase of such timber will be received, if advertised for at this season, and he has been authorized to advertise it for sale under regulations approved by the President.

On the Fond du Lac Reservation in Minnesota, also under the superintendency of the agent for the La Pointe agency, unauthorized cutting of timber has been discovered to have been permitted by the sub-agent, who, from the investigation so far made, appears to have had direct connection and collusion therewith. He was promptly discharged from the service, and the timber not already removed from the reservation has been seized, and the matter is now being further investigated with the purpose of vigorously prosecuting all persons found guilty of violating the laws of the United States applicable to the subject. It has been reported that the reservation has by this unauthorized cut-

ting been denuded of about 12,000,000 feet of timber. It is hoped that the government will receive the aid of all the good citizens of the section of country where this unlawful trespass upon Indian lands has been committed, whereby the trespassers have secured, or attempted to secure, lumber in an irregular way for much less than dealers who respect the law must pay, putting it upon the market in competition with that honestly and lawfully obtained.

MENOMONEE RESERVATION.

Congress, by act of June 12, 1890 (26 Stats., 146), authorized the employment of the Indians of the Menomonee tribe in Wisconsin, at a reasonable compensation, in cutting and banking the timber on the lands reserved for and occupied by them, the same to be sold, after due advertisement, to the highest bidder or bidders for cash, not exceeding 20,000,000 of feet, to be logged and sold in any one year.

An appropriation of \$75,000 was made to defray the expenses of cutting, banking, and sale of the logs, as provided by the law, the same to be reimbursed to the United States Treasury from the first proceeds of sales of timber thereunder. The law also authorizes future annual advances by the Secretary of the Treasury, on the order of the Secretary of the Interior, out of moneys belonging to said Indians, for the purpose of enabling them to carry on the logging business, as provided in the act. The tribal consent to the provisions of this act was required before it should be put in operation. This consent was given by the tribe in October, 1890, and rules and regulations prepared for the government of this logging business were approved by the Department on January 7, 1891, and operations begun thereunder.

When the logs cut and banked during the first season's operations had been scaled and advertised for sale, it was found that the limit fixed by the law had been exceeded by 2,769,560 feet. As it was reported and believed that the surplus logs would deteriorate by exposure if left on the river bank for a year or more, and that they might at any time be consumed by forest fires common in that country, authority was granted for the sale of the whole quantity cut. The total proceeds amounted to \$232,262.78. Deducting therefrom \$27,453.40 for the timber cut in excess of the limit allowed by law leaves \$204,809.38 as the result of the legitimate operations for the season by the Indians in the business. After reimbursing the United States to the extent of the amount advanced for expenses, there remains about \$130,000 to be disposed of under the law one-fifth of which is required to be deposited in the Treasury of the United States to the credit of the Menomonees, to be used at the discretion of the Secretary of the Interior, for their benefit; the remaining four-fifths to be deposited in the Treasury to bear interest at 5 per cent per annum, said interest to be expended for the benefit of the Indians.

It is claimed on behalf of the Indians that there was no intention on

their part to cut more timber than the law allows; that in working in many different camps, widely separated, they unavoidably exceeded the limit. But the Department construing the law strictly, caused the \$27,453.49, the proceeds of logs cut in excess of 20,000,000 feet, to be covered into the Treasury to the credit of the United States. I recommend, however, that Congress provide by proper legislation for disposing of that sum so that the Indians may receive the benefit thereof.

The Indians are urging that the act be amended so as to allow a greater quantity of logs to be banked in any one year, claiming that 20,000,000 feet does not give them work enough for the season. I, however, doubt whether it will be wise to comply with their wishes. The danger is that the Indians will neglect all effort in agricultural and other pursuits, if the logging business can be so operated as to provide them with what is absolutely necessary for their support.

INDIAN DEPREDACTION CLAIMS.

Among the important laws enacted by the last Congress is the act approved March 3, 1891, "to provide for the adjudication and payment of claims arising from Indian depredations" (26 Stat., 851). Under this act jurisdiction is conferred upon the Court of Claims for the adjudication of "all claims for property of citizens of the United States taken or destroyed by Indians belonging to any band, tribe, or nation in amity with the United States, without just cause or provocation on the part of the owner or agent in charge, and not returned or paid for."

Such claims, if they accrued prior to July 1, 1865, are required by the act to have been pending before the date of its passage. Appropriate legislation on this subject has frequently been recommended by this Department, and urged upon the favorable consideration of Congress. It is believed that, under the provisions of the act referred to, justice will now be done in the prompt adjudication and settlement of meritorious claims, so long deferred to the injury, not only of honest claimants, but to the embarrassment of the United States in establishing the true measure of justice for the claims presented. The operation and application of the provisions of the law will disclose whether any changes in or amendments to it are necessary for the accomplishment of its beneficent purposes.

The claims for depredations committed by the Indians filed in this Department, as shown by the report of the Commissioner of Indian Affairs, aggregate in number 7,985, and in amount \$25,589,006. The evidence, reports, and all other papers connected with these claims are now being drawn from files of the Office of Indian Affairs on calls made by the Court of Claims.

CREEK PAYMENT.

The Indian appropriation act approved August 19, 1890 (26 Stat., 340), provided for payment of \$400,000 per capita to the members of the *Creek Nation*, in accordance with article 3, of treaty of 1866 (14 Stat.,

787), under direction of the Secretary of the Interior, "unless otherwise directed by the President of the United States." The President, upon consideration of the subject, decided to give no special directions, allowing the payment to be made as the statute required.

No specific provision having been included in the act making the appropriation for the payment of the expense necessarily incident to the taking a census of these people, without which a per capita payment could not be made, or for pay of a specially bonded disbursing agent to make the payment, the authorities of the Creek Nation were called upon to have a census of the people prepared, which having been effected, the funds were placed in four installments of \$100,000 each to the credit of the treasurer of the nation, to be paid strictly per capita to all those duly entitled, at the same time directing that a reliable officer of the Department personally supervise the payment, to the end that the law be strictly complied with and justice done to all.

This payment has been made in a most satisfactory manner. The treasurer of the Creek Nation holds a small balance of the fund to meet the claims of a number of persons whose names were omitted from the census reported. These will be duly considered and decided upon by the national council at its next meeting, when the payment will be finally concluded.

INDIAN FINANCES.

From the Commissioner's report it appears that the amounts appropriated by Congress for the Indian service for the fiscal years 1890-'91 and 1891-'92 were as follows:

TABLE 17.—*Appropriations for 1890-'91 and 1891-'92.*

Appropriations.	1890-'91.	1891-'92.	Increase.
Fulfilling treaties with Indian tribes, permanent . . .	\$1,543,675.29	\$3,996,829.08	\$2,453,153.79
Fulfilling treaties with Indian tribes, annual	1,597,740.00	1,754,740.00	157,000.00
Support of Indian tribes, gratuities	746,000.00	757,500.00	11,500.00
Support of Indian schools	1,842,770.00	2,291,650.00	448,880.00
Incidentals and contingent expenses	171,000.00	173,000.00	2,000.00
Current and miscellaneous expenses	1,226,209.40	4,510,273.40	3,284,064.00
Total	7,127,394.69	13,483,992.48	6,356,597.79

Under the head of "Fulfilling treaties with Indian tribes, *permanent*," are such specified sums as are required to be appropriated annually under existing treaties, either for a certain number of years, or for an indefinite period; and for fulfilling treaties with the Indian tribes *annually* are the sums approximately estimated for expenditures during the fiscal year, for which the appropriations are made for clothing, subsistence, agency and school employes, etc., under existing treaties. The other items of this table are explained in the report of the Commissioner, and need not be dwelt upon.

The unexpended balances of the permanent funds are shown in the following tables:

TABLE 18.—*Unexpended balances of permanent funds available for 1890-'91 and 1891-'92.*

Balances.	1890-'91.	1891-'92.	Increase.	Decrease.
Of funds appropriated, treaty stipulations of a permanent character.....	\$739,211.31	\$787,055.52	\$47,844.21	.....
Of funds appropriated for erection of school buildings at various points.....	81,380.20	105,007.18	23,710.98	.....
Of appropriations for negotiating treaties with certain Indian tribes, surveying and allotting Indian lands, digging ditches, and proceeds of sale of Indian lands.....	411,328.81	401,054.02	.....	\$10,274.79
Of Indian moneys, miscellaneous.....	153,833.24	145,112.77	.....	8,720.47
Total.....	1,385,750.56	1,438,319.49	71,555.19	18,905.26
Net increase.....			52,559.93	.....

NOTE.—The balance of \$105,097.13 available for erection of school buildings included liabilities incurred before June 30, 1891, but not yet paid for.

The trust funds held at the beginning of the fiscal years 1890-'91 and 1891-'92 were as follows:

Trust funds held at commencement of 1890-'91 and 1891-'92.

Trust funds.	1890-'91.	1891-'92.	Increase.
Principal.....	\$21,244,818.39	\$24,256,808.42	\$3,011,990.03
Accrued interest, annual.....	1,058,276.87	1,198,558.86	140,281.99
Accrued interest, balance.....	967,406.43	973,643.85	6,237.42
Total.....	22,270,501.69	26,429,011.13	3,158,509.44

The increase arises from the sale of lands by the Cheyennes and Arapahoes, Sac and Fox, Sisseton, and other tribes.

The funds available for expenditures are shown to be as follows:

Money available and expenditures made during fiscal year ending June 30, 1891.

Sources.	On hand July 1, 1890.	Expended during year.
Fulfilling treaties with Indian tribes, permanent.....	\$1,543,675.29	\$810,750.66
Fulfilling treaties with Indian tribes, annual.....	1,597,740.00	1,522,042.66
Support of Indian tribes, gratuities.....	746,000.00	673,642.26
Support of Indian schools.....	1,842,770.00	1,572,194.03
Current and miscellaneous expenses.....	1,226,209.40	413,628.54
Incidental and contingent expenses, Indian service.....	171,000.00	161,090.22
Interest on trust funds.....	1,058,276.87	1,052,030.45
Total.....	8,185,671.56	6,205,387.82
<i>Balance, permanent.</i>		
Of funds appropriated under treaty stipulations of a permanent character.....	739,211.31	739,211.31
Of funds appropriated for erection of school buildings at various points.....	81,386.20	1,280.02
Of funds appropriated for negotiating treaties with certain Indian tribes, surveying and allotting Indian reservations, digging ditches, and proceeds of sales of Indian lands.....	411,328.81	71,953.06
Of Indian moneys, miscellaneous.....	153,833.24	63,166.47
Of interest on trust funds.....	967,406.43	.....
Total.....	2,353,165.99	875,600.86
Aggregate.....	10,538,837.55	7,080,987.68

Those available for the fiscal year ending June 30, 1891, are shown to be as follows:

Total moneys available for fiscal year ending June 30, 1892.

Sources.	Amount.
Appropriations.....	\$13,483,902.48
Balances.....	1,438,319.49
Interest on trust funds.....	1,198,558.86
Interest, balances.....	973,643.85
Total.....	17,094,514.68

The trust funds of the five civilized tribes are stated to be as follows:

Of the \$24,256,808.42 principal held in trust, as shown in the 1891-'92 column of Table 19, the sum of \$8,009,924.52 belongs to the five civilized tribes in the following proportion:

Trust funds of the five civilized tribes.

Tribes.	Amount of principal.	Annual interest.
Cherokees.....	\$2,636,634.13	\$137,808.88
Chickasaws.....	1,308,695.65	68,404.95
Choctaws.....	564,594.74	33,094.73
Seminoles.....	1,500,000.00	75,000.00
Creeks.....	2,000,000.00	100,000.00
Total.....	8,009,924.52	414,308.50

The interest on the principal of these funds is placed semi-annually with the United States assistant treasurer at St. Louis, Mo., to the credit of the treasurer of each nation, and the expenditure of these funds is entirely under the control of each nation and its council. This office has no control whatever over these expenditures.

The trust funds of other tribes are as follows:

The balance of the before-named sum of \$24,256,808.42, amounting to \$16,246,883.90, belongs to a number of tribes, as stated below, and the interest thereon, say 4, 5, 6, and 7 per cent, as the case may be, is either paid to or expended for the benefit of the respective tribes:

Trust funds of tribes other than the five civilized tribes.

Tribes.	Principal.	Tribes.	Principal.
Cheyenne and Arapahoes.....	\$1,000,000.00	Sac and Fox of the Missouri.....	\$21,650.12
Chippewa and Christian Indians..	42,560.36	Sac and Fox of Mississippi.....	55,058.21
Delawares.....	874,186.54	Sac and Fox of Oklahoma.....	300,000.00
Eastern Shawnees.....	9,079.12	Santee Sioux.....	20,000.00
Iowas.....	171,543.37	Senecas.....	40,979.60
Kansas.....	27,174.41	Senecas, Tonawanda Band.....	86,950.00
Kaskaskias and Peorias, etc.....	52,000.00	Senecas and Shawnees.....	15,140.42
Kickapoos.....	115,727.01	Shawnees.....	1,985.05
L'Anse and Vieux de Sert Indians..	20,000.00	Shoshones and Bannacks.....	13,621.04
Menomonees.....	153,039.34	Sissetons and Wahpetons.....	1,699,800.00
Oaageas.....	8,295,079.69	Stockbridges.....	75,988.60
Omahas.....	182,324.08	Umatillas.....	55,270.44
Otoes and Missourias.....	601,085.88	Utah and White River Utes....	3,340.00
Pawnees.....	309,196.41	Utes.....	1,750,000.00
Poncas.....	70,000.00		
Pottawatomies.....	184,094.57	Total.....	16,246,883.90

The balances of accrued trust-fund interest, as shown in Table 19, amounting to \$973,643.85, are applicable for such expenditures as from time to time may be found to be proper.

Attention is called to the request of the Commissioner for increase of salaries for agents, physicians, and better pay for Indian policemen.

LEGALIZING THE RECORDS OF THE INDIAN OFFICE AND AUTHORIZING THE USE OF A SEAL.

The Secretary concurs in the recommendation of the Commissioner, originally made by his predecessor in 1887, that Congress be requested to provide legislation legalizing a record in the Bureau of Indian deeds and other papers of the office, and also the use of seal to duly authenticate copies.

PENSIONS.

Under the act granting pensions to soldiers and sailors who are incapacitated for the performance of manual labor and providing for pensions to widows, minor children, and dependent parents, approved June 27, 1890, the work of the Bureau of Pensions has been greatly augmented, but with most satisfactory results. This act relieved many thousands of disabled veterans, stricken since the days of service or who, through lapse of time, can no longer *prove* their disability to have been incurred in the line of duty. Its benefits have also been extended to many thousands more of widows, orphans, and dependent parents of such veterans.

The sums of money thus expended from the national treasury have been indeed large, but this has not interfered with a liberal administration of the government in all other directions, while an obligation of the nation to its defenders, long acknowledged, has been in part and will be, under this act, more fully met. These many millions of dollars, collected largely under the tariff laws, have rapidly returned to the channels of trade and general circulation. The amount would reach the Treasury, whether there were pensions to pay or not, and there is no expenditure to which it could be more beneficently applied than for pensions for those who maintained the Government and have kept its powers so great, as there is no expenditure involving such sums that would not be criticised and opposed with the utmost virulence—even greater than that which would oppose its being hoarded in the public vaults.

PENSION ROLL.

There were on June 30, 1891, 676,160 pensioners borne upon the rolls, being 138,216 more than were carried on the rolls at the close of the last fiscal year, and classified as follows:

Widows and daughters of Revolutionary soldiers	23
Army invalid pensioners	413,597
Army widows, minor children, etc.....	108,537

Navy invalid pensioners	5,449
Navy widows, minor children, etc.....	2,568
Survivors of the war of 1812.....	284
Widows of soldiers of the war of 1812.....	7,590
Survivors of the Mexican war	16,379
Widows of soldiers of Mexican war.....	6,976
Act of June 27, 1890:	
Army invalid pensioners	97,136
Army widows, minor children, etc.....	12,209
Navy invalid pensioners	3,976
Navy widows, minor children, etc.....	2,436

FIRST PAYMENTS.

It is suggestively shown by the report of the Commissioner of Pensions that, while the benefits of the pension system have been extended to a much larger class, the average of first payments has decreased from that of preceding years, and that the average of annual payments to each pensioner has also decreased. There were 222,521 first payments of every description made during the last fiscal year requiring \$38,552,274.31, being \$69,592 less than was required for the 130,514 first payments made during the previous year. The average value of first payments made during the year was \$239.33, and the average value of first payments on claims allowed under the act of June 27, 1890, was \$71.28. The average value of first payments for the preceding year was \$485.71. Thus there appears a reduction in the *average* first payment for the year 1891, as compared with 1890, of \$246.38. The reason of this will appear upon a moment's reflection. Under the old law the claims had been pending for years, while the proofs were being perfected or they were being reached in due order, and as the first payment included all that should have been paid as pension from the date of filing the claim or, of discharge, as the facts warranted, this sum was necessarily large. But the claims under the new law have been disposed of rapidly by the additional force recently allowed by Congress, and as the pension commences from the date of filing the claim subsequent to passage of the act of June 27, 1890, the first payment on each has been small. This is connected also with the fact that many thousands of claimants, despairing of proving disability incurred in line of duty, and only thus pensionable under the old law, elected to receive the benefits of the new general disability act, and to take the lesser sums accruing from the date of the *last* filing of the claim.

Another result now perceptible, growing out of these conditions, is that all the pension claims filed, or that can be, on which first payments can accrue, will have been passed upon and disposed of within the next three years, and thereupon there will disappear from the estimates the item of first payments, now amounting to about \$30,000,000 a year. A careful estimate puts the period when first payments will cease, because

of the allowance of all original claims, at about thirty months from the present time, and it is deemed within bounds to say that at no intermediate point will the gross annual payment exceed \$160,000,000; and that at the period named, or even before, it will drop to \$130,000,000, with a rapid and continuous decline thereafter.

The present issue of certificates is about 30,000 per month, and the Commissioner expresses the belief that the Bureau will be able to carefully adjudicate and allow 350,000 claims for pensions during the present fiscal year, and that the present appropriation of \$133,473,085 will be sufficient to pay them.

PROTECTION AGAINST FRAUDULENT PENSION CLAIMS.

It is not to be concluded, however, that because the number of pensions allowed in a year is so great, that therefore the work is carelessly done, or fraud made easy. No judgment could be more erroneous or unjust, as a short explanation will prove.

The bureau force of over 2,000 persons is arranged in fifteen divisions, each with a chief, who is primarily responsible for the work done under him. Five are adjudicating divisions, having in charge all the claims, and are under the superintendence of the Deputy Commissioners, while certain other divisions are superintended by the Commissioner and Chief Clerk respectively. The Commissioner has also general control of the entire force. The body of this force, all, in fact, except the Commissioners, chiefs of division, and a few others, is under civil service rules, and has been selected with great care.

THE COURSE OF A CLAIM THROUGH THE BUREAU

is substantially as follows:

When received by the mail division the claim is forwarded to the record division, where it will appear whether the claimant has another claim pending. If he has, the new application is placed with the old and they are considered together; if he has not, it is recorded, numbered, the claimant notified, and the application and other papers properly "jacketed" (put in a separate pasteboard envelope) and forwarded at once to the adjudicating division. There, in its order, according to number, it is placed by the chief of division in the hands of an examiner, who is to see that all the requirements of the laws and of the rules and regulations have been complied with in the form and execution of the declaration. If it is found to be properly executed, a call is made upon the War Department for the history of the soldier's military service and medical treatment. The records of the War Department are, of course, those made in the field during the war; the muster rolls, company books, and the hospital records. They are beyond change or alteration, and they are entirely outside and independent of

the Pension Office. The War Department reports the military status and length of service of the claimant, together with his medical treatment during service according to the hospital records. A claimant under the general law must prove the disabilities for which he claims pension originated in the line of duty in the service, and their continuance to date. The proof required in other classes of cases must be in accord with the requirements of the particular statutes and the rules under them. These rules and regulations have been made relative to all pensions from time to time under the supervision of the Secretary, and are not only particular but most exact in detail as to form and substance required in application and proof. They have been made under administrations of different political parties, and are as carefully framed as can be against fraud and imposition, and a departure from them is not allowable in any instance.

If the application is found correct and sufficient, and consistent with the War Department's records, the claimant is ordered for examination before a board of examining surgeons, composed of three physicians in the neighborhood of the claimant's residence. The members of these boards are selected from among the best known and capable physicians in their respective communities. The duties of these examining surgeons are performed under carefully prepared instructions and under oath. In each case a complete description is required of the claimant's physical condition at the time of the examination, noting all disabilities the board finds, and at the same time the applicant must give there a statement of his disabilities as claimed by him. The board also gives an opinion as to the rate at which the party examined should be pensioned. This is done also under strict instructions calculated to expose carelessness or partiality in the board. The certificate of this medical examination soon reaches the proper case in the Bureau, and accompanies the other papers constantly thereafter. If additional proof is required by sworn statements of officers and comrades of the claimant as to origin of disability in the service, it must appear from the War Department record that witness was present with his command at the date to which he refers in his deposition.

Many cases are sent to special examiners stationed in different parts of the country to take testimony, where the origin of disability is obscure and the witnesses remote from the claimant, and he has not the means to secure their testimony. Many other cases are sent to these examiners also for the purpose of detecting fraud where suspected by the institution of special investigations. In the two years last past 56,146 such claims have been examined and reported upon, \$50,000 recovered for illegal payments, and many convictions secured for criminal violation of the pension laws.

When the evidence in the case is all in, the examiner makes a brief of it, and if upon review he finds the proof complete for a pension he indorses his opinion upon the brief and forwards the papers to the

board of review. This board is composed of reviewers and re-reviewers. The cases assigned daily by the chief of division to the reviewers when passed upon by them as to all matters of form and points of law are again and in turn passed upon by the re-reviewers as to these matters. If these two classes of officers agree with the examiner of the adjudicating division in his findings, they enter their approval upon the brief, whereupon the case is forwarded to the medical division, where all medical points are to be settled. The medical division is composed of physicians, who are divided into two classes for the examination of claims, one called examiners, and the other reviewers. The examiners scrutinize the claims in regard to all medical points, and note their opinions. These cases are in turn reexamined by the reviewers, who also note their opinions. If these two officers agree upon the medical questions and the rating in the case the claims go forward to the medical referee for final action. The medical referee is a physician of high standing and attainment, and his opinion controls in any matter in dispute under him, and his approval is essential to obtain a pension. If he approves, the claims are returned to the board of review to have written by the "raters" upon the face of the brief the rates fixed by the medical division.

The ratings entered, the cases are sent forward to the certificate division. The certificates are prepared and reviewed in that division for the Commissioner's signature. But before signing, the Commissioner causes another review to be made of the briefs and certificates under his immediate supervision. If the cases are found to be correct the certificates are signed and forwarded to the Secretary of the Interior for his examination, signature, and seal. They are then returned to the Commissioner to be forwarded to the proper government Pension Agents for enrollment and delivery to the claimants.

All invalid cases carrying a rate of \$12 and upward are subjected to another examination by competent reviewers under the immediate direction of the Commissioner, after the claims have had their ratings entered upon the brief, and before they have been sent to the certificate division.

Thus it appears that before a claim is rated and admitted for a certificate it must have the written approval of three experienced persons as to law and evidence; of two physicians in the Bureau as to medical questions that have been reported upon by a local board of three physicians making the examination of the claimant, and of the medical referee, and be corroborated by the records of the War Department as to military service, and that it must then pass examination in the certificate division, under the immediate supervision of the Commissioner.

The various divisions having charge of this important work are composed of persons of excellent character and intelligence. The examiners, reviewers, and medical officers have been selected because of

their ability and fitness. Many of these employés have filled with honor other important positions in military and civil life, and are entitled to and do receive entire confidence and respect at their homes, in different parts of the country, as well as in the Bureau. They are well versed in the laws, regulations, and departmental decisions governing the allowance of pension claims, and it is believed they perform their duties faithfully to the pensioners, and loyally to the government.

The Pension Bureau does, indeed, an immense amount of work. It has had cast upon it suddenly by the recent act of Congress, allowing dependent pensions, claims greater in number than all that were previously pending, and the aggregate has demanded and received a much larger working force. It is meant to complete early the allowance of all pensions, while those entitled are alive, if possible; but because this tremendous task is being efficiently accomplished, it is wrong to conclude that many claims without merit or illegal are allowed. There are cases in this as in all other bureaus, and in all business, public and private, that obtain undeserved favor; but they are the exceptions that prove the rule.

AGE AND SERVICE.

February 14, 1891, a system of statistical cards showing, among other facts, the age and length of service of the pensioner was adopted by the Commissioner. A compilation made from these shows that 47 years represents the age of the greatest number of persons to whom pensions have been granted since that date, both under the general law and under the act of June 27, 1890. It also shows that the largest number of pensions granted since said date under both the general and the recent laws have been to soldiers who served long rather than short terms of service. Of 12,402 soldiers pensioned under the general law during this period only 1,371 rendered service of six months and under, while 11,031 were for service of seven months and over. The largest number of certificates for particular length of service was 905 for thirty-four months and 878 for thirty-six months, while there were 50 certificates issued to men who served from one hundred and sixty-one to four hundred and seventy-six months. Of 71,004 pensions under the act of June 27, 1890, there were 1,163 soldiers who served six months and under; 26,099 who served twelve months and under, and 44,905 served thirteen months and over. The largest number issued to any class, as to months of service, was 4,693 to men who served thirty-six months.

The Commissioner remarks with commendable pride:

I submit that the data incorporated in these tables shows the fact that the pensions now being granted under the old as well as the new law are not to persons whose terms were short and who saw but little service during the war. The great majority of the certificates now being issued are to veterans of the great struggle for the Union, and many of these men would have gone to their graves in want but for the just, humane, and timely enactment of the act of June 27, 1890.

The following table shows the percentage of mortality for each class of pensioners for the last fiscal year:

Classes.	Pensioners on the pension roll at the end of the year.	Number of pensioners who died during the year.	Average death rate for each 1,000 pensioners on the pension roll on June 30, 1891.
General law, Army and Navy:			
Invalids.....	419,046	7,113	17
Widows, etc.....	111,128	3,900	35
Act of June 27, 1890,* Army and Navy:			
Invalids.....	101,112	430	14
Widows, etc.....	13,644	103	29
War of 1812:			
Survivors.....	284	112	400
Widows.....	7,590	789	104
War with Mexico:			
Survivors.....	16,379	690	42
Widows.....	6,970	92	13
Total.....	676,160	13,229	

* The cases allowed under this act cover an average period of three and one-fourth months. The actual death rate of the "invalid" pensioners was 4 per 1,000, or an average annual death rate of 14 per 1,000, while that of the "widows, etc.," was 8 per 1,000, or an average annual death rate of 29 per 1,000.

CLAIMS PENDING JULY 1, 1891.

There were pending on July 1, 1891, 928,473 claims, of which 559,027 were claims of persons who were not on the pension rolls. The remaining 369,446 were claims for increase of pensions and duplicate claims under different laws.

There are also in the files of the Pension Office 146,536 rejected claims. The following table exhibits the facts in detail:

Statement of claims pending.

Old war service prior to 1861	4, 125
Service subsequent to March 4, 1861:	
Original invalid	153, 201
Original widows'	87, 855
	<u>241, 056</u>
Act June 27, 1890:	
Original invalid	207, 475
Original widows'	70, 128
	<u>277, 603</u>
Additional claims to others, on file, but not pensioned:	
Original invalid, rejected files.....	23, 875
Original widows', rejected files.....	7, 303
Widows formerly pensioned, but dropped from the rolls	5, 065
	<u>36, 243</u>
Number of claimants not on rolls	559, 027
Number of persons pensioned under the old laws who have increase claims pending	194, 299
Number of persons on rolls under old laws who have claims pending under act of June 27, 1890	74, 697
Number of claims of widows, etc., for accrued pension of deceased pensioners.....	6, 812
Duplicate claims under act of June 27, 1890, with old claims on file	93, 638
	<u>928, 473</u>
Total.....	928, 473
Of the above pending claims the number filed under the act of June 27, 1890, is.	482, 181
There are also in the files of the Pension Office rejected claims to the number of.	146, 536

MAJ. F. C. AINSWORTH OF THE WAR DEPARTMENT.

The Commissioner expresses his obligations to Maj. Ainsworth as follows:

I take pleasure in extending to Maj. F. C. Ainsworth, chief of the records and pension division of the War Department, the thanks of this Bureau for the efficient and courteous manner with which he and his clerical force have responded to the many calls of this Bureau.

The great improvement which Maj. Ainsworth has brought to that branch of the public service enables this Bureau to receive within twenty-four hours from the day of the calls full reports as to the military and medical history of claimants as shown by the records of the War Department, whereas in former years these requests remained unanswered for months.

The Secretary desires to add his thanks to this most efficient and courteous officer.

SPECIAL CASES.

During the fiscal year the cases of 5,608 applicants were made "special" under the provisions of a Departmental circular promulgated to cover certain emergency cases. In order to have a claim made special it is required to be shown, under the oath of the claimant, or some other reputable person, that the claimant is unable to earn a living and is in destitute circumstances, or is sick and in danger of immediate death.

ISSUE OF CERTIFICATES.

Until recently the statements prepared for the use of the Commissioner and the Department of current business were incomplete, as they failed to show in detail the various classes of certificates issued and the payment required by them. Now, however, daily reports are made of the certificates issued, showing the number of certificates of all classes, the amount of the first payment of each class, the average first payment of all classes, the monthly rates of each class, and the average monthly rates. These are consolidated into weekly and monthly reports. This system of reports shows the amount of money that is being certified against the Treasury daily, weekly, and monthly, and enables the most accurate account to be kept, not only of the present work, but of the extent of future demands.

The Commissioner recommends that the weekly reports of the issue of pension certificates be printed and furnished to members of Congress.

SPECIAL EXAMINATION DIVISION.

The report of the Commissioner shows that two years ago there were more than 14,000 claims in the hands of this division, and on July 1, 1891, there were only 2,270 claims in the hands of special examiners in the field for examination. In this period of two years 56,146 claims have

been examined and reported upon, as hereinbefore mentioned. Since October, 1890, the force of special examiners on duty in the field has been reduced from 340 to 110 employés so assigned.

The special examiners who were withdrawn from the field were assigned to duty in the office to expedite pending claims under the act of June 27, 1890, as shown by the report of the chief of the division, who also states, however, that this reduction of the field force has increased the cost per case of field examinations, as the result of the larger districts and increased traveling expenses of the examiners.

Of the \$415,000 appropriated for this branch of the service for 1891, \$67,400.20 was covered into the Treasury, and the appropriation for 1892 was placed at only \$215,000.

CORRESPONDENCE WITH MEMBERS OF CONGRESS.

The Commissioner expresses great regret that it has been a difficult matter to keep as current as is desirable the correspondence of the Bureau with members of Congress. There were the enormous number of 154,815 Congressional calls during the year, being an average of about 500 per day.

The examination of the cases necessary to give proper answer as to "status" entailed a vast labor and required a large force of employés.

A new system of briefing has, however, been adopted which will greatly simplify and expedite this work.

STATISTICAL CARD.

The report gives the following information as to the adoption as a means for ready reference of the statistical card:

One of these cards is placed with each case, and upon which is entered the name of the claimant, his company and regiment, date of his enlistment and discharge, his age at enlistment, his length of service in months, his post-office address, his age at date of pensioning, rate at which he is pensioned, and the amount of first payment; also blank spaces in which to enter the date of the death of pensioner, and his age at death. From these cards have been collated the tables that are found on pages 7 and 8 giving the length of service and ages of pensioners.

From these cards the necessary information is taken from day to day for the daily report. These cards will be placed in file cases by regiments in alphabetical order by companies. The Army and Navy survivors' division will have the custody of these cards, and they will afford a most convenient and easy reference for the history of adjudicated claims, and their use will also greatly relieve the heavy labors in the admitted files.

MEDICAL DIVISION.

Orders for medical examination were issued during the year to the number of 603,641, and 474,680 medical certificates of examination were received. As a rule the boards of examining surgeons throughout the

country are graduates of some reputable medical college and have had at least five years' practice. In the selection of specialists for particular classes of disabilities the aim has been to secure the services of physicians and surgeons of the highest skill and standing. There will be a deficiency of about \$300,000 in the appropriation for the payment and fees of examining surgeons.

PENSION AGENCIES.

There are eighteen pension agencies. Ten are in government buildings and eight in rented quarters, that at Topeka having been provided a place in the building offered by Governor Crawford. The business of these agencies is conducted with accuracy and dispatch and the several agents are entitled to great commendation for their efficiency.

NEW ORDER OF PAYMENTS AT AGENCIES.

Pursuant to recommendation made in the Secretary's last annual report, by act of March 3, 1891 (26 U. S. Stats., 1082, 1083), it was provided:

That the Secretary of the Interior is hereby authorized and directed to arrange the various agencies for the payment of pensions in three groups as he may think proper, and may from time to time change any agency from one group to another as he may deem convenient for the transaction of the public business. The first group shall make their quarterly payments of pensions on January fourth, April fourth, July fourth, and October fourth of each year; the second group shall make their quarterly payments of pensions on February fourth, May fourth, August fourth, and November fourth of each year; and the third group shall make their quarterly payments of pensions on March fourth, June fourth, September fourth, and December fourth of each year. The Secretary of the Interior is hereby fully authorized to cause payments of pensions to be made for the fractional parts of quarters created by such change, so as to properly adjust all payments as herein provided. Section forty-seven hundred and sixty-four of the Revised Statutes is hereby so amended as to conform to the changes in the time of payments provided herein, and is made applicable thereto.

The sum of fifteen thousand dollars is hereby appropriated to meet the expenses involved in carrying into effect the changes herein provided for.

Under this authority action was taken so as to take effect July 1, 1891, and the arrangement was and still remains as follows:

GROUP 1.

July 4, October 4, January 4, April 4.—Buffalo, N. Y., Concord, N. H., Chicago, Ill., Des Moines, Iowa, Milwaukee, Wis., Pittsburg, Pa.

GROUP 2.

August 4, November 4, February 4, May 4.—Indianapolis, Ind., Knoxville, Tenn., Louisville, Ky., New York, N. Y., Philadelphia, Pa., Topeka, Kans.

GROUP 3.

September 4, December 4, March 4, June 4.—Augusta, Me., Boston, Mass., Columbus, Ohio, Detroit, Mich., San Francisco, Cal., Washington, D. C.

By this wise legislation the large sums to be expended for pensions are prevented from accumulating in the Treasury and be thus withdrawn from general circulation during a quarter of the year as formerly. Every month the revenue collected is disbursed at six different agencies. The receipts and expenditures go almost hand in hand.

PENSION OFFICE BUILDING.

The Commissioner states that certain repairs and improvements are now required in the Pension Office building, looking to improved ventilation and sanitary conditions, as well as to the renewal of certain furniture and carpeting, providing certain doors to the building and increasing storage capacity.

It is estimated that at least \$30,000 will be required for this purpose, and it is recommended.

LEGISLATION RECOMMENDED BY THE COMMISSIONER.

The Commissioner renews his recommendation made one year ago for a provision by law of an intermediate rating of \$50 to cover a class of claimants who are entirely incapacitated for manual labor, but who *only periodically* require the personal attendance of another person.

As the law now stands they can not receive a higher rate than \$30, as provided by the act of March 3, 1883, not being able to bring their cases within the provisions of the law of March 4, 1890, granting \$72, by reason of the requirement of the *constant* aid and attendance of another person. He recommends additional legislation in respect to the expenditures made for the care of disabled soldiers in the Government Hospital for the Insane, so that in cases in which pension may be allowed to such soldiers, after years of care at the Government expense, there may be authority for its reimbursement. These several recommendations are concurred in.

PENSION APPEALS AND PENSION LEGISLATION.

The Assistant Secretary of the Department, to whom has been assigned the duty of superintending the Board of Pension Appeals and promulgating the decisions reached in appeal cases, has well performed this most important duty. He has made report of the work of this Board. The following table is a summary:

ORIGINAL APPEALS.

Appeals pending July 1, 1890.....	4,850
Appeals filed from July 1, 1890, to June 30, 1891.....	3,272
Total.....	8,122
Appeals wherein Pension Office was sustained.....	2,243
Appeals wherein Pension Office was reversed.....	339
Appeals reconsidered by Pension Office pending appeal.....	369
Appeals dismissed.....	141
Total.....	3,092
Appeals pending July 1, 1891.....	5,030

MOTIONS FOR RECONSIDERATION.

Motions for reconsideration pending July 1, 1890.....	511
Motions for reconsideration filed from July 1, 1890, to June 30, 1891.....	176
Total.....	687
Motions for reconsideration overruled.....	310
Motions for reconsideration sustained.....	38
Motions for reconsideration allowed by the Pension Office.....	11
Motions for reconsideration dismissed.....	11
Total.....	370
Motions for reconsideration pending July 1, 1891.....	317

FEE APPEALS.

Fee appeals pending July 1, 1890.....	61
Fee appeals filed from July 1, 1890, to June 30, 1891.....	648
Total.....	709
Fee appeals wherein Pension Office was sustained.....	311
Fee appeals wherein Pension Office was reversed.....	32
Fee appeals reconsidered by Pension Office pending appeal.....	195
Fee appeals dismissed.....	6
Total.....	544
Fee appeals pending July 1, 1891.....	165

CORRESPONDENCE.

Letters referred to the Commissioner of Pensions.....	10,491
Letters sent.....	6,421

The recommendations of the Assistant Secretary for the following legislation are presented for favorable consideration:

First. That Congress authorize the Department to treat all improper, illegal, and excessive payments of pensions, whether caused by fraud or by mistake, as prepayments to be charged against current pensions, with a view to readjusting or equalizing current pension payments, within the discretion of the Secretary

Second. An amendment to the first clause of act of June 27, 1890, extending its benefits to those otherwise within the terms of the law, where the officer or enlisted man had not been honorably discharged, but had died on furlough or was otherwise absent from the technical line of duty in the service.

Third. A former recommendation is renewed, as follows, as to the proviso in the third section of the act of June 27, 1890, which provides pension for minor children who are "insane, idiotic, or otherwise permanently helpless."

"The clause properly provides that the pension granted to such children shall continue during the life of said child, or during the period of such disability; but, under the law, as it stands, in order that such children shall be pensioned during life, or during the period of such disability, it must appear that the father, or the mother, died *prior to the expiration* of the limit affixed to the pensionable minority period, viz: *sixteen years of age*; and, therefore, if, when the parent dies, the insane, or idiotic, or otherwise permanently helpless child is *more than*, instead of *under sixteen years of age*, a minor's pension can not be allowed. In view of this fact, I respectfully suggest that the act should be so amended as to admit all insane, idiotic, or otherwise permanently helpless children to minor's pension, regardless of the date of the parent's death, or remarriage, at any period *prior to and including the age of twenty-one years.*"

The amendment here suggested would be in keeping with the beneficent purpose of the act of June 27, 1890. It would reach a considerable number of cases for which the pension system has thus far made no provision, but which would necessitate only a small additional expenditure of money per annum. The experiences of the past year impel me now to further suggest that, in cases of "insane, idiotic, or otherwise helpless children" of deceased pensioners, the pensionable *age limit* be abolished, so as to admit such children at any date to the pension roll.

Fourth. That persons who, having been admitted to the hospital in the District of Columbia for care and treatment at the expense of the Government, but having neither wife nor child or living parent dependent on them for support, and having no other relative near enough to occupy on their account a pensionable status, shall not be pensionable for the period during which they receive such care and treatment.

"To create a higher rate than \$30 per month for cases wherein claimants are shown to be "incapacitated for performing manual labor and who *periodically* require the aid and attendance of other persons, but who are unable to establish the fact of the requirement of *constant* aid and attendance." Since the passage of the act of March 4, 1890, amending the acts of June 18, 1874, and June 16, 1880, and increasing the rate for a disability requiring the "constant aid and attendance of another person" from \$50 to \$72 per month, there has been no *intermediate* rate between \$30 as provided by the act of March 3, 1883, for total incapacity for manual labor, and that of \$72 per month under the aforesaid act of March 4, 1890. The wide gap existing between these two rates leaves a worthy though not numerous class of claimants without adequate provision; and I recommend that such provision be promptly made for the sake of justice and equality before the law, fixing the intermediate rate at \$50 per month for the cases described."

Fifth. An amendment of the act of March 3, 1877, so as to make it applicable to the navy beyond controversy.

ELEVENTH CENSUS.

The history of this census from its inception to June 30, 1891, has been presented in the Secretary's two previous annual reports. The efficient and commendable management of this most important business there noticed has also marked the labors of the last year. With the exception of eight or ten special agents gathering fragments of information as to manufactures the field work is completed. One thousand two hundred and fifty employes have been relieved and the population division much reduced. The number on June 30, 1891, was 2,560, and this is being constantly diminished.

Among the most notable points of the census, attention is called to the following:

The announcement of the official population November 26, 1890, as 62,622,250 has never been changed, and upon that announcement the apportionment law was passed nearly two years sooner than at previous censuses.

The population of the United States, according to the Eleventh Census (June 1, 1890), by minor civil divisions was transmitted to the Department September 15, 1891, and is now printed and ready for Congress. This work has been more rapidly done than by any previous census, though it should be remembered that the Census Office has been obliged to deal with 13,000,000 additional population.

The great bulk of the census work is completed. All the cards chronicling facts relating to 63,000,000 (total number of population, including Indians and whites on Indian Territory and Alaska) of people have been punched and are ready for the comparatively cheap and easy process of passing through the machines. The system of mechanical tabulation has increased the accuracy of the work, and admits of the tabulation of important facts and complicated tables far in advance of previous censuses. Actual investigation has clearly shown that the percentage of error in tabulation, which the machines do not throw out or that can possibly go undetected, is not over a quarter of 1 per cent.

The Superintendent of Census started out with a purpose to make a statistical census. No inquiry not called for by the several acts was undertaken, and all matters relating to the latent resources of the country and the technology of our industries omitted. As a result of this policy much of the special work is now completed, some of the volumes are now in the Government Printing Office, and others will be completed and ready for the Printer by December 31, 1891. These facts will be found in detail in the reports of the Superintendent of Census covering the year ending June 30, 1891.

Although the work of the Eleventh Census is much further advanced than that of the Tenth Census at this time, the per capita cost has been about the same, and the total estimated cost of the census when

completed will, after allowing for the usual progressive enhancement per capita cost of successive censuses, not exceed other enumerations. Of course, in this calculation the money expended for printing and binding and for special increase required by Congress and appropriated for separately are omitted.

The financial report of the Superintendent submitted comprises a complete statement of the expenditures of the office from its organization to the end of the fiscal year, June 30, 1891.

ADMINISTRATION.

For salaries.....	\$2,304,630.87	
For furniture and fittings.....	56,703.05	
Miscellaneous.....	592,830.49	
		<u>\$2,954,164.41</u>

SPECIAL AGENTS.

For per diem.....	786,729.59	
For traveling expenses.....	323,334.19	
Miscellaneous.....	138,945.86	
		<u>1,249,009.64</u>

SUPERVISORS.

For compensation.....	177,745.00	
For clerk hire.....	65,916.11	
Miscellaneous.....	15,271.13	
		<u>258,932.24</u>
Enumerators.....		<u>2,481,887.83</u>
Total.....		<u><u>6,943,994.12</u></u>

Paid from appropriations as follows:

Expenses of the Eleventh Census.....	5,813,247.71
Farms, homes, and mortgages.....	814,021.90
Printing, engraving, and binding.....	310,724.51
Total.....	<u>6,943,994.12</u>

Under the head of "Administration," "Miscellaneous" covers rent, stationery, and miscellaneous supplies and services, together with traveling expenses of employes other than special agents.

Under the head of "Special Agents," "Miscellaneous" covers the purchase of supplies, the hire of temporary assistance, clerical and other, and, in short, all expenses of special agents, except per diem and traveling expenses.

The foregoing amount is chargeable to branches of investigation as follows:

Census proper.....	\$536,348.23
Printing and stationery.....	434,120.72
Supervisors.....	268,849.93
Enumerators.....	2,481,887.83
Population and social statistics.....	887,680.21
Manufactures.....	474,420.03
Agriculture.....	140,601.57

Vital statistics and special classes.....	\$204,269.31
Wealth, debt, and taxation	155,974.50
Farms, homes, and mortgages	834,981.63
Mines and mining	191,246.00
Fish and fisheries	119,016.76
Transportation	105,616.52
Insurance.....	46,399.46
Churches	27,146.09
Pauperism and crime.....	35,435.33
Total.....	6,943,994.12

The apparent discrepancy in the amount chargeable to the "farms, homes, and mortgages" branch of the investigation and the amount expended from the appropriation for that special investigation is due to the fact that expenditures were made from the general appropriation for the expenses of the Eleventh Census in the collection of statistics relating to mortgage indebtedness prior to the passage of the act of February 22, 1890.

The following table gives the total number of clerks carried on the pay roll for each month during the last fiscal year:

Number of employés.

Months.	Total number on pay rolls.	Total amount of pay rolls.
July, 1890.....	1,812	\$110,717.30
August, 1890.....	2,115	130,075.75
September, 1890.....	2,212	146,316.10
October, 1890.....	2,238	155,214.45
November, 1890.....	2,184	132,537.35
December, 1890.....	2,161	154,798.45
January, 1891.....	2,151	150,796.70
February, 1891.....	2,121	144,305.20
March, 1891.....	2,298	162,403.00
April, 1891.....	3,119	184,605.25
May, 1891.....	3,108	202,270.80
June, 1891.....	2,560	184,250.50
Amount of pay rolls prior to June 30, 1890.....		409,942.15
Grand total to June 30, 1891.....		2,303,221.00

PRELIMINARY PRINTING.

The Superintendent reports the number of copies printed since the beginning of the Eleventh Census as about 115,000,000, of which some 20,000,000 were envelopes (properly classed as stationery).

About 35,000,000 copies of circulars, tally-sheets, bulletins, etc., have been printed at the census printing office, together with nearly 2,000,000 tabulation sheets used by the Census Office, for some of these had to be passed through the machine fifteen times before being complete.

All the population bulletins and a majority of those on special subjects were printed in this office.

That the expenses have been kept down, relatively speaking, to the same cost per capita as in 1880 is evidence of the strict economy which has prevailed in the Bureau.

Superintendent Porter, in a recent address before the American Statistical Society in Boston, made the following statement in regard to the changes inaugurated by the Eleventh Census. Gen. Francis A. Walker, who was Superintendent of the Ninth and Tenth Censuses, presided at the meeting of the association. The Superintendent said:

The Eleventh Census will be more statistical and deal less with our latent resources and the technology of our industries than the Tenth Census did. It includes in its scope several new features, such as the investigation into private and corporate indebtedness, the special inquiry relating to the soldiers of the late war, and the widows of veterans. Several new questions were added to the population schedule, which, as I have shown, will throw light upon important questions. A report has been made upon the condition of the Indians, and valuable reports on the statistics of education, churches, and the fisheries are nearly completed. To this extent we have undoubtedly taken a decided step ahead of other censuses. The population work has been strengthened. I have no reason to doubt that enumeration of the people was fully equal to the enumeration of the Tenth Census, and that enumeration could not be excelled under the present system. The tabulation has been improved and the classification greatly extended. Facts that have been collected in 1870 and 1880, but never tabulated, will find their way into the volumes this time. As five-sixths of all my experts and chiefs had experience in the Tenth Census, the office has benefited by their experience.

In the special work healthy statistical advancement has been made all along the line. We did not attempt the impossible. We reduced the number of questions. We confined ourselves strictly to the salient points. We did not try to be too original. We were not too proud to take up the plans where our brethren of the Tenth Census laid them down. We did not enlarge the scope, but oftener reduced it. In this way we strengthened our vital statistics by the five-year registration work; we made it possible to secure correct schedules of the special classes by institution enumerators; we brought the electrical tabulation to bear on the statistics of mortality, population, crime, pauperism, and benevolence; we discarded all but the essential questions in the educational schedules; we reduced the work relating to religious bodies to a point where the preachers and ecclesiastical officers would answer the questions; we strengthened the wealth, debt, and taxation work at every point; we added several important new inquiries to the agricultural and horticultural statistics and took subjects omitted by all previous censuses; we trebled the number of places in which the manufacturing statistics were withdrawn from the enumerators and placed in the hands of special agents, and brought every expert under the control of a central head at Washington, so there should be no overlapping; we applied the same method to the statistics of the nation's mineral resources; we made the inquiry relating to fish and fisheries more statistical; we added several important new features to the statistics of transportation; we included the ten years' work and the fraternal and independent beneficiary assemblies in the insurance branch; we made a complete report of the condition of all the Indians, and we have for the first time, I believe, the names of all but two small tribes on file in the Census Office, and we have kept up the reputation of the Tenth Census on the report on the population and wealth of Alaska.

Even some of those who have heretofore been clamoring about the imperfections of the census are fair enough to admit, in the face of the vast amount of valuable information already published, that the Eleventh Census has thus far eclipsed all others. Bulletins have already been issued giving the population of every State and Territory of the United States by minor civil divisions, and others giving summarized special in-

formation on almost every topic under consideration have already been issued. The pages of these bulletins number 2845 as against 960 for the Tenth Census. This preliminary work has established the Eleventh Census with the public, and the volumes that will be laid before Congress will attest its scope, character, and accuracy.

It is easy enough to assault a work of such vast proportions. The Eleventh Census, however, will stand as much fair and honest criticism as any similar work of the same magnitude heretofore done, whether at home or abroad. On the question of errors, the following from Superintendent Porter is of interest:

These imperfections are not the result of dishonest work, of incompetent work, of slovenly work. They are the result of the system under which the census is taken. Time enough is not allowed to start the machinery of this tremendous inquiry, embracing, as I have shown you, so many subjects and such infinite detail. We have work here, which, if properly done, would be sufficient to make a life study for thirty or fifty of our brightest specialists, literally dumped upon the shoulders of a man drawn from other occupations of life and instructed by act of Congress to raise an army of 60,000 raw recruits and complete the task. If he takes time to do it the public becomes impatient and declare it drags everlastingly. If he puts it through rapidly, croakers rise up all over the land and declare the work can not be correct. Now, the remedy for all this is a permanent Census Bureau.

Attention was called to the recommendation for a permanent Census Bureau and the same approved in the annual report of the Secretary for 1889. (See page 17 of that report).

VETERAN ENUMERATION.

In the veteran section 256,498 cards have been transcribed to date. Circular requests have been sent to about 500 representative newspapers throughout the country, calling for a gratuitous publication of the veteran blank, for the purpose of eliciting responses from the veterans who were overlooked by the enumerators in June, 1890, or those who believe they were thus neglected. The results thus far have proven most beneficial. There seems to be but little question that the original enumeration was, so far as numbers alone are concerned, a remarkably full one, and through the efforts of the press, now in progress, the stragglers are being also added to the list. When this work is completed the enumeration of the survivors of the war of the rebellion may be fairly said to be as full and complete as it is practicable to make it. Congress not having made an appropriation for printing these names, it has not been deemed prudent to maintain a large number of clerks on this branch of the work.

ESTIMATES FOR THE COMPLETION OF CENSUS AND PUBLICATIONS.

Further appropriation will be necessary to complete the farms, homes, and mortgages work and the other work originally planned. The work of correcting and supplementing the returns of the enumerators has been immense, and the time and clerical labor involved in this branch of the

work can not be estimated in advance. The cost of obtaining the names, length of service, etc., of the veterans of the war has likewise been great. The completion of the work on farms, homes, and mortgages will also require further large expenditures.

The Superintendent, while refusing to commit himself absolutely, estimates the probable cost of the completion of the work, including the inquiries which were authorized by Congress after the act of March 1, 1889, was passed, and hence not provided for in the original appropriation for the Eleventh Census, at \$1,000,000. This sum, he thinks, will finish the entire work, including farms, homes, and mortgages, and the names of veterans of the war, in accordance with the original plans and in a manner highly creditable to the nation. Meantime, he states, the present appropriations are sufficient to keep the work of all divisions moving as rapidly as anticipated in the forecast of the work, and adds that while it is possible to handle millions of schedules, punch millions of cards, and address millions of envelopes more rapidly with a large force, the work of adjusting minor civil divisions, of making final tabulations, of preparing copy for the printer, of writing text and revising proofs, can only be done by the expert few. Ample provision has been made by Congress for the Census Office in all its divisions until 1892.

The Superintendent's report furnishes, with much other information in detail, a list of the volumes and subjects to be embraced in the final publication. This list is annexed to this report for ready reference. (Appendix F.)

PATENT OFFICE.

The annual report of the Commissioner of Patents will be duly submitted to Congress, as required by law. It appears that, including applications for patents for inventions, for designs, reissues, for the registration of trade-marks and labels, and for caveats, the total number of applications received was 45,949; number of patents granted, 25,307; trade-marks and labels registered, 2,033; patents withheld for non-payment of fee, 3,514; patents expired, 12,383. The total receipts were \$1,302,749.39, and the expenditures \$1,145,502.90, leaving a surplus of \$157,291.69 to be turned into the Treasury, and increasing to \$3,947,847.97, the amount in the Treasury to the credit of the patent fund.

COMPARATIVE STATEMENT.

Number of applications for patents, including reissues, designs, trade-marks, and labels.

June 30, 1887.....	38,408
June 30, 1888.....	37,769
June 30, 1889.....	39,702
June 30, 1890.....	43,810
June 30, 1891.....	43,616

Number of applications awaiting action on the part of the office.

July 1, 1887.....	7,601
July 1, 1888.....	7,227
July 1, 1889.....	7,037
July 1, 1890.....	6,585
July 1, 1891.....	8,911

	Receipts.	Expenditures.
June 30, 1887.....	\$1,150,046.05	\$981,644.09
June 30, 1888.....	1,122,994.83	953,730.14
June 30, 1889.....	1,186,557.22	990,697.24
June 30, 1890.....	1,347,203.21	1,081,173.56
June 30, 1891.....	1,302,794.59	1,145,502.90

It will be seen from this statement that the unusually large number of applications for patents during the year ending July 30, 1890, was very nearly equaled by the number received during the past year. In these two years nearly 10,000 cases have been presented for consideration and disposal by this office beyond what would have demanded action if the number of applications had not exceeded the average (38,735) for the years 1888 and 1889. The additional duty thus imposed has borne heavily upon the examining force, and it is to its credit that without any increase in its numbers the cases undisposed of at the close of the year numbered so slightly in excess of those on hand at the close of the previous year. The Commissioner directs attention to the opinion expressed by him in his last report (in referring to the large number of cases disposed of during that year) to the effect that the pace kept up and rendered necessary by the very great increase in the number of applications for patents was inconsistent with the high degree of care in conducting examinations which the patent system calls for when properly administered, and from the showing of decrease in the number of cases disposed of it is evident that the maximum limit of effort was reached during the previous year, and that it could not be justly sustained during the year just ended.

In his last report the Commissioner recommended an increase of 18 in the examining corps and of 49 in the clerical force of his office. At the last session of Congress the examining force was increased by 10 persons, and 4 were added to the clerical force. It would seem from the results of the past year that the estimate of the additional force required was not too high, and that a further increase of force should be provided to meet the increase in the volume of business and to insure the examination of applications with deliberation and painstaking care as well as with promptness and dispatch.

The Commissioner renews the recommendations in his report for last year of legislation providing for appeal direct from the examiners-in-chief to the supreme court of the District of Columbia, releasing the head of the bureau from the duty of hearing these appeals; that section 4887 of the Revised Statutes be amended so as not to impose a

penalty upon American inventors who patent their inventions abroad before their American patents are granted; that interstate trade-marks—those used in connection with traffic between the States—be registered in the Patent Office in the same manner as trade-marks used in foreign commerce; and, that sections 4885 and 4935 of the Revised Statutes relating to payment of patent fees be amended so as to avoid practical difficulties arising when money is paid for the Patent Office to other officers than the Commissioner of Patents.

MORE ROOM NEEDED.

The Commissioner of Patents, upon October 6, 1891, addressed to the Secretary a letter describing the condition of the Patent Office and setting forth the reasons why relief should be granted. He urges with great earnestness that the Land Office be removed from the Patent Office building altogether, because of an appropriation of \$16,000 made by Congress for rent of buildings for the Land Office.

The letter of the Commissioner is annexed to this report. (Appendix G). He states that the overcrowded condition of the office is apparent upon slight examination only, and that it interferes sadly with the work of the force, affects their health, and renders unsightly the otherwise handsome interior of a noble building.

During the month of July 1891, the Land Office vacated fifteen rooms which up to that time had been occupied by it, and turned over to the Patent Office six rooms of the ordinary size, and another of one-half the ordinary size.

The Commissioner of the General Land Office reported to the Secretary, July 7, 1891, as follows:

Referring to your reference of April 30, 1891, regarding rental of the proposed building on G street, between Sixth and Seventh, and to the report of Messrs. Conway and Redway of May 14, 1891, under my directions, I desire now to add that since that date the pressing need for additional room for the Patent Office has been met by the surrender of the amount of space demanded by that Bureau in this building. It is hoped no additional room will be absolutely required until Congress can be asked to authorize the construction of a building specially adapted to the needs of the General Land Office.

It is not necessary to indorse all the Commissioner of Patents claims, to support him in his earnest appeal for more room in the building. If a suitable building were made for the General Land Office, or a building for it and some of the other bureaus now located in different parts of the city of Washington, the accommodation asked could be afforded. In the great structure known as the Patent Office building, or that of the Department of the Interior, there are only the offices for the Department proper, the Patent Office, and a part of the General Land Office. The Pension Office has its own building, built by the United States, and there also the Commissioner of Railroads finds a place. But the offices of the Bureaus of Indian Affairs, Geological Survey, Education, the Census, and a large part of the General Land Office are outside,

scattered here and there through the city in rented houses. These tenements are selected with care, and are obtained only at heavy rents; but they are entirely unfit to be the depositories of immensely valuable archives and papers constantly there in use; moreover, in case of fire the loss of life is apt to be great.

It is an utterly careless disregard of the public interests to allow this state of affairs to continue, and an indisposition to expend the means necessary to secure proper offices for the great Department of the Interior, with its varied and important bureaus, does not arise from a true spirit of economy. It can not be expected in the ordinary course of events that all the valuable records will long escape loss or destruction from fire or other cause in these rented offices. They are not secure.

Among the most valuable of these possessions are those of the General Land Office, and although supplied with the means to rent outside houses, the Secretary has not thought it best to send all these from the Government building to these more insecure places. They would there become subject to loss by destruction, but more so from misuse and illegal changes. There has been no expression by Congress that the Patent Office was, by means of this appropriation, to be given the entire quarters heretofore occupied by the General Land Office, and the Secretary recommends that no such change be made before another Government building is provided. Such a building could be utilized also, as has been suggested by the Commissioner of the General Land Office, for a depository of the records of surveyors-general offices and others when discontinued.

CENTENNIAL CELEBRATION OF PATENT OFFICE.

It is pleasant to state that one of the most gratifying incidents of the past year was the centennial celebration of the patent system of the United States. No element of progress is so peculiarly American as the faculty of invention. It has won, not alone unparalleled success at home, but world-wide renown, and it was eminently fit that the system by which its creations are protected should meet with recognition and its inauguration be duly celebrated. In November last a movement was begun by a number of prominent residents of Washington to commemorate this important epoch in the history of the nation, and a widespread public interest in the subject was evident from the prompt response on the part of leading inventors and manufacturers of inventions to a call for a celebration to be held in this city April 8 to 10, 1891—

To commemorate in a fitting manner the important event, and place on record the nation's appreciation of the labors of those whose ingenuity, patience, and tireless effort have exercised such a potent influence in accelerating the prosperous growth of the nation and in aiding the progress of our civilization.

The importance of the event, and the respect due to so numerous a gathering of those eminent in the field of invention and in the practical

application of the results of inventive genius, demanded and received the cordial coöperation of the executive branch of the Government. The first public meeting was presided over by the President, and other meetings by the Secretary of the Interior and the Commissioner of Patents.

At the series of meetings embraced in the programme addresses were made covering a broad range of subjects bearing chiefly upon the relations and effects of invention, and including a review of a century of our patent law and the origin and development of the American patent system.

To Mr. Mitchell, then Commissioner of Patents, much of the success of this important and interesting celebration was due. He resigned on July 31, 1891, to devote himself again to his profession, after having discharged all his official duties most efficiently for a period of over two years.

GEOLOGICAL SURVEY.

Special attention is asked to the report of the Director of the Geological Survey. During the twelve years since the institution of this Bureau the mineral products of the country have nearly doubled in value and much more than doubled in quantity. The Survey force has been constantly employed in investigating the mineral resources of the country and in ascertaining and mapping the distribution of rocks, minerals, and ores, and the results of this work have been published and widely distributed; and it is just to ascribe a considerable part of the increase in mineral production to this agency.

Even more important is the work of the Survey in reducing the cost of mining operations, both by the publication of maps and treatises indicating the distribution of mineral resources, and by the development and publication of the laws of mineral occurrence, whereby fruitless labor in prospecting and mining is avoided. In this way the cost of production is diminished and prices are proportionately reduced. The mean price of the mineral products of the United States has been reduced more than one-third during the past twelve years. During the past year alone this reduction in price has resulted in a saving to the consumers of mineral products in the country a sum amounting to fully \$200,000,000.

In addition to the direct work upon mineral resources, the Bureau has extended topographic surveys over and constructed maps of an area of 493,790 square miles in thirty-nine States and Territories, thus covering nearly one-sixth of the area of the United States. The issue of accurate maps representing the precise configuration of the land surface has greatly reduced the cost of construction of public and private works (city waterworks, works for the development of water-power, railways, wagon roads, etc.), and thereby added greatly to the material prosperity of the country. Moreover, the soils of considerable areas

have been examined and classified, forests have been studied, quarry rocks, brick clays, and other building materials have been investigated, and the results of the work have been made public. By these means the Bureau has aided in developing and at the same time economizing the resources of the country, thereby increasing our wealth and power to an extent which, while it can not be measured, is unquestionably important.

The Geological Survey was instituted as an agency for scientific research relating to the material resources of the country as well as for the direct examination of these resources. It is gratifying to observe that in this direction it has made substantial progress. An opportunity for estimating this progress has just occurred in the meeting in this country of an international body of geologists, most of whose members were official representatives of geological surveys and commissions instituted by European and other governments. It was the Secretary's pleasure to welcome this distinguished body to the country on behalf of the Executive. To one attending the meetings of the Congress it was strikingly evident that while the eminent geologists of foreign countries are doing much toward the promotion of their science, the American geologists connected with the Survey are fully abreast of them in all respects, and well in the lead in the development of the principles of geology. This was the general expression at the International Congress.

The appropriation for geologic work during the past year was somewhat increased. As a result several of the existing divisions were strengthened, and two new divisions were instituted. One of these is charged with the investigation of the phosphates and other mineral resources of Florida; the other has entered upon the study of the crystalline and semicrystalline rocks of New Jersey. Preliminary topographic and geologic surveys have also been commenced in Alaska, and substantial results are recorded in the report of the Director.

Work in the geologic divisions already organized was carried forward vigorously during the last year, in many states and territories.

Part II of the Report of the Director is devoted to papers on irrigation, covering the three general topics of topography, hydrography, and irrigation engineering and construction. The first paper is a report by A. H. Thompson, chief topographer, upon the location and survey of reservoir sites by the western division of topography during the fiscal year ending June 30, 1891. This is essentially a continuation of the work outlined in the Eleventh Annual Report.

IRRIGATION RESERVOIRS.

During the year surveys of 148 reservoirs have been made by the Topographic Division. Of these 33 are in California, 46 in Colorado, 28 in Montana, 2 in Nevada, and 39 in New Mexico. A description of each of these sites is given in detail, with the location, the area and

character of the drainage basin, the position of the dam and its height, the permanent survey marks, altitude of the top of the reservoir, area, contents, and the location of the lands to be benefited by the construction of the reservoir. A description of the lands to be included within the proposed site is given in Land Office terms, and also action affecting the title to these lands as shown by official records. Each of these descriptions is accompanied by a small map showing the quarter sections, townships, and ranges in which the reservoir is situated, the outline of the site, the relative position of the dam, and other features of interest in this connection. In the selection of these reservoir sites the topographers were guided by general instructions regarding the practicability of utilizing the reservoirs, so that these should be at points where not only is water storage needed, but where the construction can be profitably accomplished.

By thorough examination and survey, the future possibilities of agricultural development within these localities have been assured, and the responsibility now rests upon Congress of taking such action as shall render these sites available to the lands dependent upon them. In a previous portion of this report the views of the Secretary are expressed at some length upon what he deems Congress should do as to these valuable possessions.

The second paper of this report is by F. H. Newell, upon the hydrography of the West, and gives the present available data upon the water supply of the arid lands, together with a detailed description of the hydrography of the Rio Grande and Gila basins of New Mexico and Arizona. This paper occupies the same position with regard to agricultural development and irrigation engineering that a description of the mineral resources does to the mining industries. It gives our present knowledge of the water resources, upon the extent of which depends the growth of the arid country beyond the pastoral condition.

Next to the topographic survey there is perhaps no scientific examination the results of whose measurements are of greater importance than this to the thorough understanding and utilization of the arid lands. A knowledge of the facts concerning the distribution of the available water supply, the fluctuations month by month and year by year, the extreme range and the average conditions is fundamental in the planning and construction of irrigation works. No large system of water supply can be outlined or successfully executed until these are known, and unless these measurements are continued year by year the legislators who would guard the interests of the people as well as the projectors of great works, whether constructed by the use of private or public funds, build upon doubts and uncertainties.

This is illustrated by plates and figures, showing graphically the amount of water available in various drainage basins and all of the fluctuations of the streams, thus exhibiting at a glance facts of prime importance to the person who would gain a knowledge of the peculiarities of the rivers whose waters are needed for irrigation.

The last paper is upon irrigation works in British India, and is written by H. M. Wilson, who visited that country for the purpose of examining the great system of water supply, whose magnitude far surpasses those of any other country in the world. The paper is devoted mainly to the discussion of facts nearly related to the conditions of our own country. Methods of construction and other details from which lessons can be drawn by American engineers, are dwelt upon with considerable detail, and less attention is given to those subjects which, though of fundamental importance to India, have little or no reference to the needs of our own arid lands. Thus, notwithstanding the fact that the paper pertains to a foreign country, the results appeal directly to the projectors of irrigation works, to engineers, and to all who are interested in the highest development of the western half of the United States. All of the more important features are fully illustrated, and details of interest to irrigation engineers are in many cases elaborated.

BUREAU OF RAILROADS.

From a consideration of the Report of the Commissioner of Railroads and of that of the engineer under him, it appears that the various roads coming under the jurisdiction of his office are being rapidly improved in much the same particulars as reported last year. Steel rails, stone culverts, iron bridges, grades reduced, machine shops reconstructed, terminal facility acquired, and better equipment obtained are the general features pointed out. These improvements are met the present year by wonderfully abundant harvests and renewed activity in the business of the country, and the results, which will be chronicled next year, may be anticipated as the best ever attained by these companies. It may be said that the basis on which the original loan by the government was made to these railroads remains unimpaired.

Especial effort has been made to ascertain the correctness of the reports of the several companies as to their earnings, as it is upon these the percentage is paid to the United States. They show a decrease of \$1,417,962.

The following abstract as to the earnings and payments of the several aided companies is taken from the Commissioner's report, where detailed statements may be found. The following figures come only to December 31, 1890, as the Thurman act requires settlements to be made for the calendar year. The fuller report gives the same to June 30, 1891, also.

UNION PACIFIC.

The gross earnings of the Union division for the year ending December 31, 1890, were \$15,180,316.36 and the net earnings \$3,985,973.44. The requirement for the year was a sum equal to 5 per cent of the net earnings and the entire Government transportation, and amounted to \$1,078,548.57, being \$82,055.21 in excess of 25 per cent of the net earnings. The gross earnings of the aided portion of the Kansas division

were \$3,040,122.13, and the net earnings \$774,473.20. The requirement for the year was a sum equal to 5 per cent of the net earnings and one-half of the Government transportation, and amounted to \$90,628.26. The total amount due from the Union Pacific Railway Company, on account of the Union and Kansas divisions for the year ending December 31, 1890, was \$1,169,176.83. There were settled by the accounting officers of the Treasury during the same period accounts for transportation services rendered amounting to \$1,126,918.70.

The total debt of the Union Pacific Railway Company to the United States, principal and interest, December 31, 1890, after allowing credit for all transportation accounts settled and moneys paid into the Treasury, was \$51,761,208.17. There are still some transportation accounts pending action in the Treasury which will somewhat reduce the amount of indebtedness.

CENTRAL PACIFIC.

The gross earnings of the aided portion of the Central Pacific Railroad for the year ending December 31, 1890, were \$8,875,789.27, and the net earnings \$1,012,861.08. The requirement for the year was a sum equal to 5 per cent of the net earnings and the entire Government transportation, and amounted to \$537,520.44, being \$284,305.17 in excess of 25 per cent of the net earnings. There were settled by the accounting officers of the Treasury during the same period accounts for transportation services rendered amounting to \$434,637.81.

The total debt of the Central Pacific Railroad Company to the United States, principal and interest, December 31, 1890, after allowing credit for all transportation accounts settled and moneys paid into the Treasury, was \$53,682,612.29. There are a number of transportation accounts pending action in the Treasury which will reduce the amount of indebtedness.

Settlements with the Sioux City and Pacific and the Central Branch Union Pacific Railroad Companies, under the acts of 1862 and 1864, were made for the calendar year.

SIoux CITY AND PACIFIC.

The gross earnings for the aided portion of this road for the year ending December 31, 1890, were \$464,283.29 and the net earnings \$185,616.13. The requirement was 5 per cent of the net earnings and one-half of the Government transportation, and amounted to \$20,818.84. There were settled by the accounting officers of the Treasury during the same period accounts for transportation services amounting to \$11,216.40.

The total debt of the Sioux City and Pacific Railroad Company to the United States, principal and interest, December 31, 1890, after allowing credit for transportation accounts settled, was \$3,654,621.90.

CENTRAL BRANCH UNION PACIFIC.

The gross earnings of the aided portion of this road for the year ending December 31, 1890, were \$484,776.65 and the net earnings \$99,771.40. The requirement was 5 per cent of the net earnings and one-half of the Government transportation, and amounted to \$12,569.68. There were settled by the accounting officers of the Treasury during the same period accounts for transportation services amounting to \$43,291.92.

The total debt of the Central Branch Union Pacific Railroad Company to the United States, principal and interest, December 31, 1890, after allowing credit for transportation accounts settled and cash paid into the Treasury, was \$3,414,170.70.

TOTALS.

The total gross receipts of the bonded roads for the year amounted to \$28,045,287.70; net earnings, \$6,058,695.25; Government requirement, \$1,740,085.79; paid in transportation services, \$1,616,064.83. Accounts in the Treasury not yet settled will offset balance due the Government for the year. *The total debts of the bonded roads to December 31, 1890, amounted to \$112,512,613.06.*

FLOATING INDEBTEDNESS OF THE UNION PACIFIC.

The floating indebtedness of the Union Pacific on June 30, last, amounted to about \$20,000,000. This debt was secured by collateral, but a want of confidence having been engendered as reported by extraordinary causes connected with the stock market, action was required that should protect the company's credit. The floating debt was consolidated by the issue of the obligations of the company maturing at a fixed time to be equally secured, and a fund to be provided for the necessary corporate uses of the company. To this end the bonds, stocks and other securities held by the company, representing a par value of \$100,113,365.47, and an estimated value of \$41,912,835.53 were deposited with Drexel, Morgan & Co., trustees, to secure an issue of \$24,000,000 of three-year 6 per cent promissory notes. These notes are offered for sale at 92½ per cent of their face value and accrued interest, and most of the creditors have accepted them in payment of their claims.

The sale and disposition of these securities is to be under control of a committee of five, to be composed of three creditors and two directors of the company. Although a resolution was unanimously passed at the meeting requesting the committee to add one government director to their number (which would seem to be no more than required by the spirit of section 13, act of July 1, 1862), up to the time the report of the government directors was filed in the Department, this request had not been complied with.

In their report, the government directors (p. 5) express grave doubts as to any beneficial results from the foregoing action. They say:

The Government directors have, after careful consideration, reluctantly concurred in the course of action adopted, as presenting apparently the only means of relieving the company, but we can not but regret the temporary character of the provision for relief, and the additional fact that it has become necessary to hypothecate not only the bonds but the stocks representing ownership or control in the extensive coal properties and the companies of the entire tributary system. The security for the notes is so ample and the character and financial ability of the committee so high that we can not anticipate any unfavorable result; but in a degree it hazards the integrity of the system, and under possible unfavorable conditions for the sale of the bonds within the time, beyond the control of the directors or the committee, might ultimately lead to its disintegration and the loss of its most valuable tributaries.

The increase in the debts of the bonded roads to the government is because the percentages required by law to be paid do not create a sum equal to the interest the government has to pay on the subsidy bonds.

The Commissioner indorses the policy of the Union Pacific in aiding the construction of branch lines, which shall be tributary to the main line. He says:

It would be almost impossible to emphasize too strongly the value to the Union Pacific of its branch lines. It is alone through them that the operations of the main line, on which the Government holds a lien, have been made profitable. Some of the branch lines may not be profitable in themselves, but as feeders to the main line they have a value which does not appear on their own balance sheets. The

transcontinental business, which was large and lucrative a few years ago, is now divided among many competitors, and is almost insignificant as to amount and profit. It is the local business alone, most of which is contributed by the branch lines, that brings profit to the main line. Were it not for these "feeders" the Union Pacific would yield no net earnings whatever, and the property would not be worth the amount of its first-mortgage bonds.

In this position he is strongly supported by the government directors. (See their report, dated September 15, 1891, pp. 4, 5.)

FUNDING THE DEBTS.

The government directors of the Union Pacific Railway Company are George E. Leighton, St. Louis, Mo.; John F. Plummer, New York, N. Y.; Jesse Spalding, Chicago, Ill.; Rufus B. Bullock, Atlanta, Ga.; and Joseph W. Paddock, Omaha, Nebr. These gentlemen have wide experience in railroad affairs, and were selected for their personal worth and well-known integrity. They support the Commissioner of Railroads strongly in his advocacy of refunding at an early day the debt about to become due from the company. The argument of the Commissioner will be found at length in his report.

In relation to this matter the directors say:

The nearly concurrent maturity, in the near future, of the underlying first-mortgage bonds, of the debt to the Government, and of the collateral notes recently issued, aggregating over \$100,000,000, is a fact not to be overlooked or disregarded. It presents possible conditions which a wise foresight should amply provide for, and in abundant season.

Under all the conditions surrounding this property at present, and the prospective conditions of the future so far as they may be foreseen, we do not believe that the position of the Government as a creditor will in any degree be improved by delays in such adjustment; whilst, on the other hand, the ability of the company to discharge its obligations to the Government and the public would be materially enhanced, and ultimate payment more certainly secured, by such legislation as will permit of a consolidation and unification of the system, and an *extension of the security of the Government, either directly or indirectly, to the whole property.*

This subject was fully discussed by the present Secretary in his annual report for 1889, where the history of the debt and the different propositions for its settlement were set forth; and again in 1890, where he expressed his views as being still unchanged on the subject. Further discussion here is deemed unnecessary, but the importance of some action by Congress without further delay is earnestly presented for your consideration. The debt will mature within the next six years. This question has been urged now since the beginning of the present administration, and no step has been taken in regard to it by Congress. It seems that some public policy should be adopted and declared before the time comes for action, whether it be to sell the road or to extend the obligations. There seems to be no alternative but to sell if the debt is not extended, for it is conceded on all hands that the company will not be able to pay the bonds at maturity.

The Commissioner recommends the appointment of a commission of

not over three members to consider the condition of the debt, to confer with the railroad company, and report their conclusions to Congress. If these are taken from those in government employment no expense would be incurred, and they would have more time, he suggests, probably, than members in Congress or on Congressional committees might find it possible to devote to the subject.

GOVERNMENT DIRECTORS.

It is a pleasure to state that the government directors above named have performed their duties during the past years with more than ordinary industry and intelligence, and no doubt have had at heart the best interests of the government, endeavoring by all means in their power to protect the same through their position on the board and as members of the different committees of the Union Pacific Railway. The important points of their report have already been mentioned in connection with the report of the Commissioner of Railroads. It will be printed with this report.

BUREAU OF EDUCATION.

The Commissioner of Education makes an interesting report respecting the work of his Bureau. Pursuing the line of policy of his predecessors he has endeavored to make this Bureau useful by collecting accurate and pertinent statistical information regarding the existing condition of education at home and abroad, with special attention to new experiments in school organization and methods of instruction. This is in accordance with the letter and spirit of the act of Congress creating the Bureau. A centralized control of education is not contemplated, but this Bureau has been provided as an agency to collect and distribute such information as will give to all a just survey of the operations of educational institutions both in this and other countries. Such a function can be performed only by the general government, and evidently instead of limiting state and local control over schools, it reinforces it, as it increases enlightened directive power everywhere. It induces a wise approximation of methods and an adaptation to the needs of each locality of whatever is good in all, and thus a harmonious system is secured.

During the past year the Bureau has completed several concise statements exhibiting the present systems of some of the most important countries of Europe, many of which systems are very recent in their origin, and consequently in a state of rapid change and progress.

From a study of these statements it is found that the English-speaking peoples lay too much stress on local self-government to begin their education systems from the natural center. They do not prescribe a uniform model, nor attempt a national control over the whole movement, but always advance to develop local undertakings and local management.

Comparative study the Commissioner deems very profitable in education, since the school has to deal often with children whose growth has been arrested at some low stage and fixed at that point. It is one of the great problems of education to remove the child nature out of this partial paralysis into a state of growth and development, making it again susceptible to higher influences.

In order to study more systematically the educational methods used in various parts of the world, to cure or to prevent the dangerous development of paupers, insane, and criminals, that advances with the rapid increase of cities, the Commissioner has seized the opportunity created by the last Congress, and obtained a specialist, who is to devote most of his time to the study of this subject. The well-known scheme of Mr. Booth in East London, and the remarkable university settlement of Mr. Toynbee in the same place, and widely imitated, have given an impulse to a variety of promising experiments. There is no field of greater interest than this open at the present for the collection of statistics and judicious comparison of them.

The Commissioner again emphasizes the idea that the usefulness of his Bureau depends on the publication and dissemination of the valuable information it collects or procures. He reports that during the past year he was able to secure the printing of but two circulars of information, while he had on hand ready for the press ten other separate documents on a variety of educational subjects, and twelve completed numbers of the "Contributions to American Educational History." These numbers are the histories of education in Ohio, Michigan, Massachusetts, Connecticut, Nebraska, Delaware, West Virginia, Maryland, Mississippi, Missouri, Louisiana, and Rhode Island. That the issue of these valuable documents may be no longer delayed, he recommends in his report, and has submitted in his estimates, a separate specific appropriation of \$20,000 to continue the publication of the educational histories of the several states. This recommendation is heartily indorsed by the Secretary.

AID OF COLLEGES FOR TEACHING AGRICULTURE AND MECHANIC ARTS.

On August 30, 1890, the President approved an act of Congress entitled:

An act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of an act of Congress approved July second, eighteen hundred and sixty-two.

This act provides that for the fiscal year 1890 \$15,000, and for each subsequent year for ten years an amount greater by \$1,000 than that of the preceding year, and thereafter \$25,000 a year, be paid to each state and territory for the benefit of colleges of agriculture and the mechanic arts established or to be established under the provisions of an act of Congress approved July 2, 1862, with the proviso that in states

where the races are educated separately the fund may be equitably divided between one college for white students and one institution for colored students. The Secretary of the Interior was charged with the proper administration of this law.

The act was properly brought to the attention of the governors of the several states, to secure such action by them as would enable the Secretary to perform the duties devolving upon him. A circular letter was sent to the governor of each state and territory. It called attention to the act of Congress and to the Commissioner's report, and requested answers under the state seal to the following inquiries:

(1) Is there in your state a college of agriculture and the mechanic arts established under, or receiving the benefit of, the act of Congress of July 2, 1862?

(2) If so, is any distinction of race or color in the admission of students thereto recognized or made in the state law or in the regulations and practice of the institution?

(3) Or (a) is there such a college for the education of white students, and also (b) a similar college for colored students, or an institution of like character aided by the state from its own revenue for the education of colored students in agriculture and the mechanic arts? Please give name, location, and president or administrative officer of each of such institutions.

(4) Has your legislature met in regular session since August 30, 1890, or when will it so meet?

(5) If it has not so met, do you, as authorized by the act referred to, assent in behalf of your state, to "the purpose of said grants," as provided in section second of the act?

(6) Please give the name, title, and address of the state treasurer or other officer to whom payments should be made under this law.

It also requested a copy of the charter of such college, with the rules and regulations, duly certified by the secretary of state.

The replies with accompanying documents were referred to the Bureau of Education for examination and for recommendation as to payment. This labor was performed and certificates drawn for the payment of the first installment of the grant (\$15,000 to each state and territory), as follows:

November 8, 1890, Colorado, Delaware, Illinois, Indiana, Kansas, Michigan, Minnesota, Oregon, Tennessee, Wisconsin, Massachusetts, Maryland, New Hampshire, Ohio, Vermont, Iowa, New Jersey, New Mexico, New York, Pennsylvania, Wyoming.

November 11, 1890, Connecticut, Mississippi, North Dakota, Virginia.

November 13, 1890, Arizona, Nevada, Utah.

November 19, 1890, Nebraska, South Dakota.

December 20, 1890, Texas.

January 5, 1891, California.

January 8, 1891, North Carolina.

February 18, 1891, Florida.

March 19, 1891, Missouri.

March 30, 1891, Maine, Kentucky.

April 23, 1891, Arkansas.

May 12, 1891, West Virginia.

June 29, 1891, Georgia.

July 7, 1891, Louisiana.

July 15, 1891, Alabama.

The governors of Idaho, Montana, Rhode Island, and Washington did not reply.

In Rhode Island the application for the new grant was delayed or

prevented, it is reported, by an attempt to transfer the proceeds of the original grant to a new institution.

Establishment of a college of agriculture and the mechanic arts in Oklahoma has been reported, but payment to that territory has not yet been determined on.

The general assembly of South Carolina passed an act dividing the share of the grant received by that state equally between one college for white students and one institution for colored students. This division is not deemed equitable by the Secretary, in view of the fact that over 60 per cent of the population of the state is colored. The act of the assembly leaving the governor no power to modify the basis of division, the case of this state has been reserved for submission to the President.

All the states and territories having been certified as entitled to the first installment, another circular letter was sent out announcing that the second installment of the appropriation made was now due and payable to those institutions shown to be the proper beneficiaries of the act and had received the first installment.

Such information was asked regarding compliance with the law as might enable the Secretary to "certify to the Secretary of the Treasury as to each state and territory whether it is entitled to receive its share of the annual appropriation." Attention was invited to the limitations placed by the act upon the use of the money received, which is "to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction." It was held that this language authorizes, besides the payment of salaries, the purchase from this money of apparatus, machinery, text-books, reference books, stock, and material used in instruction or for purposes of illustration in connection with any of the branches enumerated.

On receipt and approval of these reports certificates were issued for the second installment of the grant (\$16,000 to each state and territory, for the year ending June 30, 1891), as follows:

January 20, 1891, Pennsylvania.	April 29, 1891, New York.
February 7, 1891, Colorado, Connecticut, Delaware, Indiana, Iowa, Kansas, Michigan, Minnesota, Nevada, New Hampshire, Ohio, Tennessee, Utah, Vermont.	April 30, 1891, Oregon.
March 3, 1891, Maryland.	May 12, 1891, Maine, Texas.
March 10, 1891, Mississippi, South Dakota, Virginia, Wyoming, New Mexico.	June 10, 1891, Illinois.
March 17, 1891, New Jersey, North Dakota.	June 19, 1891, North Carolina.
April 18, 1891, California, Florida, Wisconsin, Arizona.	June 24, 1891, Nebraska.
	June 29, 1891, Georgia.
	July 7, 1891, Louisiana.
	July 15, 1891, Alabama.
	July 21, 1891, Arkansas.
	July 26, 1891, West Virginia.
	August 5, 1891, Missouri.
	August 11, 1891, Kentucky.

No report was received from the Massachusetts Agricultural College, the institution which had been designated by the governor to receive the benefit of the Congressional grant. Litigation had arisen between the college and the Massachusetts Institute of Technology respecting a division of the fund, and the first installment was still in the hands of the treasurer of the Commonwealth. Massachusetts, therefore, was not certified as entitled to the second installment.

The Secretary approved June 19, 1891, a recommendation of the Commissioner to the following effect:

That certification for the third payment be made on July 1 to the Secretary of the Treasury, in behalf of all states and territories which, by that time, have been passed upon and certified as entitled to receive the second payment, whose legislatures or governors have given proper assent to the purpose of the Congressional grant, and where the division of the fund, if it is shared between two institutions, has been made upon a satisfactory basis.

And certificates were issued for the third installments (\$17,000 for the year ending June 30, 1892), to Arizona, California, Colorado, Connecticut, Florida, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Michigan, Minnesota, Mississippi, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Wisconsin, Wyoming, Arkansas, Delaware, Kentucky, Missouri, West Virginia, Alabama, Georgia, and Louisiana.

The following table exhibits the beneficiaries under the act named:

Beneficiaries under act of Congress of August 30, 1890, in aid of colleges of agriculture and the mechanic arts.

Alabama: Agricultural and Mechanical College (white), Auburn.	Kansas: State Agricultural College, Manhattan.
State Normal and Industrial School (colored), Huntsville.	Kentucky: Agricultural and Mechanical College (white), Lexington.
Arizona: University of Arizona, Tucson.	State Normal (colored), Frankfort.
Arkansas: Industrial University (white), Fayetteville.	Louisiana: State University (white), Baton Rouge.
Branch Normal College (colored), Pine Bluff.	Southern University (colored), New Orleans.
California: University of California, Berkeley.	Maine: State College of Agriculture and Mechanic Arts, Orono.
Colorado: State Agricultural College, Fort Collins.	Maryland: Maryland Agricultural College, College Station.
Connecticut: Yale College, New Haven.	Massachusetts: Agricultural College, Amherst.
Delaware: Delaware College, Newark.	Michigan: State Agricultural College, Lansing.
Florida: Florida State Agricultural College (white), Lake City.	Minnesota: University of Minnesota, Minneapolis.
State Normal School (colored), Tallahassee.	Mississippi: Agricultural and Mechanical College of Mississippi (white), Agricultural College.
Georgia: University of Georgia, Athens.	Alcorn Agricultural and Mechanical College (colored), Rodney.
Illinois: University of Illinois, Urbana.	
Indiana: Purdue University, La Fayette.	
Iowa: Iowa Agricultural College, Ames.	

Beneficiaries under act of Congress of August 30, 1890, in aid of colleges of agriculture and the mechanic arts—Continued.

Missouri: University of Missouri (white), Columbia.	South Dakota: Dakota Agricultural College, Brookings.
Lincoln Institute (colored), Jefferson City.	Tennessee: University of Tennessee, Knoxville.
Nebraska: University of Nebraska, Lincoln.	Texas: Agricultural and Mechanical College (white), College Station.
New Hampshire: New Hampshire College of Agriculture and Mechanic Arts, Hanover.	Prairie View Normal School (colored), Hempstead.
New Jersey: Rutgers Scientific School, New Brunswick.	Utah: Agricultural College, Logan.
New Mexico: Agricultural College, Las Cruces.	Vermont: University of Vermont, Burlington.
New York: Cornell University, Ithaca.	Virginia: Virginia Agricultural and Mechanical College (white), Blacksburg.
Nevada: State University, Reno.	Hampton Normal Institute (colored), Hampton.
North Carolina: North Carolina Agricultural College (white), Raleigh.	West Virginia: West Virginia University (white), Morgantown.
Shaw University (colored), Raleigh.	West Virginia Institute (colored), Kanawha.
North Dakota: Agricultural College, Fargo.	Wisconsin: University of Wisconsin, Madison.
Ohio: Ohio State University, Columbus.	Wyoming: University of Wyoming, Laramie.
Oregon: State Agricultural College, Corvallis.	
Pennsylvania: Pennsylvania State College, State College.	

EDUCATION IN ALASKA.

Under the head of education in Alaska, the Commissioner reports the inauguration and successful working of the experiment of appointing local school committees in settlements where suitable white men could be found for the purpose. Such committees were appointed in nine of the principal villages of the territory. This step was taken with a view to interesting a larger number of the citizens of Alaska in their schools and thus preparing them for the management of their own educational affairs, and also on account of the impossibility of any one board of education exercising personal supervision over more than a limited portion of the vast area of Alaska. During the year, with the meager appropriation at its command, the Bureau of Education supported in the territory 13 day schools with an enrollment of 745 pupils, and aided 12 contract boarding schools with an enrollment of 1,106 pupils.

The most interesting feature of the work in Alaska the past year consists of the steps taken toward introducing the domesticated reindeer from Siberia into Alaska in connection with the industrial school work. On the return of the general agent from Arctic Alaska in the fall of last year he urged upon the attention of the Department the fact that the Eskimos inhabiting the shores of the Arctic Ocean and Behring Sea were in a starving condition, the whale and walrus, their food supply from time immemorial, having been driven beyond

their reach by the whalers. The matter was brought to the attention of Congress, and an appropriation was proposed for the introduction of the reindeer as a means of subsistence for the natives; but meantime several leading newspapers procured subscriptions to the amount of \$2,000 to be used in an initial experiment. With a part of this sum the general agent, who has recently returned, reports that goods suitable for trading with the natives were purchased and taken in May last on board the revenue cutter *Bear*, Capt. M. A. Healy, commanding. With the permission of the Treasury Department and the approval of the Russian Government the cutter landed at several points along the Siberian coast, a small herd of reindeer was purchased, and the question whether these animals could be successfully transported by sea—long denied by both natives and white settlers—was solved in the affirmative. Sixteen deer were brought to a small island in the harbor of Unalaska.

The need of a larger appropriation for Alaskan schools is urged, and the policy of a regular annual increase of \$10,000 a year over each preceding year is recommended. This feature is embodied in the Commissioner's estimate of \$60,000 for this work next year, and is deserving of the favorable consideration of Congress.

Respecting the routine business of the Bureau, a considerable increase in the correspondence is reported but a heavy falling off in the number of documents printed and distributed. The library shows an increase of 4,037 volumes.

THE TERRITORIES.

ARIZONA.

The report of the acting governor of Arizona estimates the present population at 70,000, which would indicate an increase of 10,000 over the figures shown a year ago by the census enumeration. This is accounted for by the fact that there has been quite an influx of settlers from Kansas, who have been attracted by the great agricultural advantages of the southern valleys of the territory.

According to the official tables the taxable property is valued at \$28,270,466.28 and the average rate of taxation for all purposes is \$3.28 on the \$100. The governor contends, however, that not over one-third of the property is assessed; that very little property except real estate is rated at over one-half of its actual value, and that in point of fact the taxable property is worth \$70,000,000. He deprecates this system of low valuation and high tax rates as misleading, and calculated to deter intending settlers and investors. The total territorial, county, and municipal debt amounts to \$3,400,002.77. The act of Congress of June, 1890, which was referred to in the last report, and which authorized the funding of this debt at 5 per cent in fifty-year bonds redeem-

able after twenty years, has not as yet resulted in the consummation of the refunding, but efforts are being made to complete it. Additional legislation by Congress may be necessary before the bonds can be placed.

Arizona contains immense areas of undeveloped land. There is here a great empire capable of unlimited possibilities when its vast resources, as yet practically untouched, shall be developed. The approximate quantity of public land, unsurveyed, exclusive of military and Indian reservations, subject to settlement under existing laws July 1, 1891, in the Gila district, which alone is larger than the State of Pennsylvania, is 20,221,775 acres.

LANDS AND PRODUCTS.

The arable lands of the territory are perhaps unexcelled for their depth and richness of soil and for the quality, variety, and quantity of products. Maricopa County is the most important agricultural district, and it has about 267 miles of irrigating canals in operation, which have reclaimed 250,000 acres of land. Other large irrigating enterprises are being rapidly prosecuted, and hundreds of thousands more acres will be soon opened to agriculture. Oranges, lemons, figs, raisins, and all the other fruits which are raised in southern California can be raised abundantly, and they mature at least a month earlier than in California. Wheat, corn, alfalfa, barley, peaches, apricots, grapes, limes, olives, and an endless variety of fruits attain great perfection in parts of the territory, and it is stated that no more favorable spot can be found upon the globe for the growth of citrus fruits than in Yuma county. The fig and pomegranate are indigenous to the soil. For ripening and mellowing wines the climate presents such conditions that the most exquisite flavor and bouquet are imparted. Cotton has been tried with satisfactory results. Wild hemp is indigenous to the country and grows to 15 and 17 feet. It seeds itself annually and covers a stretch of 100 square miles along the Colorado River. Ramie, sugar cane, sorghum, sugar beets, and peanuts yield abundantly. Vegetables, garden stuffs, and melons grow all the year round.

FORESTS.

The pine forests of northern and central Arizona cover an area of 1,750,000 acres, and there is an abundant supply of lumber sufficient for the consumption of a large population for a great number of years. Expensive transportation, however, renders the price too high for competition with outside markets. Ten thousand millions of feet is the estimate made as to the quantity of pine timber fit for sawing purposes.

It is urged that, as the future agricultural development of the territory depends largely upon an abundant and permanent supply of water from the mountains, and as the water supply depends in turn upon the proper preservation of the forests, such legislation should be framed as would forever preserve a suitable forest covering for the present timber-growing areas.

IRRIGATION.

As nearly all of the public lands of Arizona are properly called "arid," the question of their reclamation is one of intense importance to the territory. Plans have been proposed for the erection, at the expense of the general government, of reservoirs and canals for the purposes of irrigation, and it is urged that the very large outlay necessary for such work would be recompensed by the sale of these public lands. The governor contends, however, that a more legitimate and substantial encouragement to development would follow the ceding of these lands to the territory, followed by a loan from the government of sufficient money to the territory, upon 2 per cent bonds, to construct the works. This suggestion is submitted in connection with the general subject of the arid land and irrigation elsewhere discussed.

MINERALS.

The great mineral deposits of the mountains of Arizona have always furnished its greatest wealth-producing industry. Gold, silver, and copper yielded to the aggregate value of \$7,791,272 in the year ending June 30, 1891. Great activity prevails in mining and many new and extensive operations are being projected. During the past year valuable deposits of onyx of a superior quality have been discovered in Yavapai and Maricopa counties. There is an almost limitless quantity of red and gray sandstone of superior quality in the quarries of Arizona.

STOCK.

The climate and conditions for stock-raising are exceedingly favorable in Arizona, and it is estimated that 300,000 cattle and 2,000 horses have been shipped from the territory during the year.

RAILROADS.

Railroad mileage in the territory is 1,082 miles, of which 393 miles are operated by the Atlantic and Pacific and 383 miles by the Southern Pacific of Arizona. The former traverses an upland plain (Colorado Plateau) at an average elevation through Arizona of 5,000 feet, and the latter crosses the valleys and agricultural section of the southwest. The construction of north and south lines is very much needed in order to facilitate the interchange of products, and recent legislation has provided for twenty years exemption from taxation railroads built without subsidies and under certain conditions.

Congress created the customs district of Arizona by the act of April 29, 1890. It embraces about 450 miles of international border on the northern frontier of Mexico, with its chief port of entry at Nogales. The total value of imports to June 30, 1891, was \$3,194,209, and the total amount of duties collected was \$35,991.94.

The common-school system of the territory is firmly established and

well maintained by a carefully constructed code of laws. The school age is from 16 to 18, and all children, except those of Chinese and Indians not taxed, are entitled to admission and a free education. In round numbers, one-third of the children are at school. In 1890 there were 219 schools, employing 240 teachers. A patriotic custom of daily floating the stars and stripes over school houses has become almost universal, and the Nogales district, almost the extreme of the United States, claims the honor of having first made the privilege of raising the flag in the morning the highest reward of merit known to the school. The University of Arizona is a result of the appropriation of 72,000 acres of public lands by Congress in 1881, and of money in liberal sums subsequently. It has received altogether \$56,000 from the general government and \$59,245.89 from the territory. The university is located at Tucson. The buildings were nearly completed at the date of the governor's report, and it was proposed to have everything ready for students by September 30, 1891. There will be a school of mines and an agricultural experimental station in conjunction with this university.

Fewer complaints have been made on account of Indian crimes and depredations during the past year than for any like period in the history of the territory. A few Indian outlaws, estimated from eight to thirteen, still continue to evade the authorities by escaping across the Mexican border, and some concert of action with the Mexican military authorities is suggested for the purpose of their arrest or extermination.

As the impracticability of conceding the requests formerly made for the removal of the more warlike Apaches from Arizona is now recognized, the appeal is renewed that they be disarmed and prohibited the use and possession of rifles and fixed ammunition. It is contended that otherwise they will continue a constant menace to the peace of the territory.

STATEHOOD.

The question of admission to statehood of course continues to agitate the public mind, and under an act of the legislature a convention was recently held for the purpose of forming a state constitution. The principal contention was the question of the adoption of the Idaho "test oath" as applicable to Mormons. Much as it is to be deprecated it is still a fact that this question has been treated and considered from a political rather than a moral standpoint. The Democrats oppose the test oath and the Republicans favor it. It is claimed by independent thinkers, says the governor, that owing to the junction of Arizona with Utah it would be very easy to so colonize the territory with Mormons by either political party as to absolutely control the affairs of state, and it is true that they do now hold the balance of political power in Arizona.

The legislature has authorized a loan of \$30,000, subject to the approval of Congress, to be secured by 5 per cent 20-year territorial bonds,

with which to provide a proper exhibit of the resources of Arizona at the World's Columbian Exposition in 1893.

RECOMMENDATIONS BY THE GOVERNOR.

(1) That Arizona be admitted into the Union as a state upon the adoption of a proper constitution by the people.

(2) That all the public lands within Arizona be ceded to the territory or state.

(3) That all public lands within the territory be surveyed.

(4) That the sixteenth and thirty-sixth sections of the public lands (school lands) be made available to the territory at once, and that provision be made for the selection of good sections in lieu of bad.

(5) That all Apache Indians under military surveillance in the territory be disarmed and prohibited from the use and possession of rifled guns and fixed ammunition.

(6) That the mineral and coal lands on the San Carlos Reservation be segregated and opened for occupancy and development by white citizens, and that the money received from the sale of these lands (as other public lands are sold) be placed in trust for the use of the Indians.

The following recommendations made last year are renewed:

(7) It is requested that Congress appropriate for the erection of buildings for the use of the public service in Arizona.

(8) That the salaries of the present judges in Arizona be increased to \$5,000 per annum.

(9) That the pay of legislators in Arizona be increased to \$10 per day.

(10) That appropriations be had by Congress to pay the governors and secretaries of the territories the amounts allowed them by law under section 1845, Revised Statutes of the United States, 1878.

(11) That Congress appropriate a reasonable sum for artesian-well boring in this territory.

(12) It is also recommended that provision be made by Congress for loaning money to the state or territory at a low rate of interest and under proper regulations for the construction of reservoirs and the reclamation of the arid lands.

(13) Should further legislation by Congress be necessary to make effective the funding act of Arizona approved June 25, 1890, it is earnestly recommended that favorable action be had.

(14) That Congress approve and confirm without delay act No. 103 of the Sixteenth legislature of Arizona, approved March 19, 1891, entitled "An act to provide for the collection, arrangement, and display of the products of the Territory of Arizona at the World's Columbian Exposition of 1893."

Many of these are to be dealt with solely as political questions, but all are worthy earnest consideration by Congress.

NEW MEXICO.

The annual report of the governor treats first and as of primary importance the subject of land titles. The unsatisfactory condition of the titles of the Spanish and Mexican grants and the efforts of the people of the territory through many years to obtain relief by the establishment of a tribunal for the adjudication of the claims arising under these titles has prevented the settlement and improvement of lands and investment of the capital necessary to develop the natural resources of the country. The passage of the "Land-court bill" of March 3, 1891, has therefore been most gratefully hailed by the people.

It is now predicted that every fertile acre will be quickly cultivated, and that the best class of population will be attracted to the territory.

Several amendments are, however, earnestly solicited in order to make it entirely just to all classes of owners.

The "eleven league claims" in section 13 is said to be not only inequitable but in direct violation of private rights and treaty obligations. The provisions with regard to "small holdings" affect thousands, and are said to be vitally defective. Some detail of explanation is given, but the governor signifies his purpose to submit later a special communication covering fully the whole question. The questions have been already noticed in this report under the title of "Public Lands."

A constitutional convention was held in September, 1889, and the constitution formulated was submitted to a vote of the people on October 7, 1890, but it was defeated by a large majority. This is explained by the governor not to be the result of disinclination to assume the condition of statehood but because of party differences. The governor appeals for an enabling act under which a constitutional convention can be held next July, and urges that the population of 153,076 as compared with the smaller population of Idaho, Wyoming, and Nevada, together with the great reduction of illiteracy since 1880, strengthens the claim.

The progress in public education is one of the most notable features of the report. The late census indicates an increase of 283 per cent in the number of children enrolled in the public schools, and many new school houses are being erected. The agricultural college at Mesilla Park, Las Cruces, is in full operation. The university buildings at Albuquerque are just completed, and it is probable that a normal school will be opened therein during the coming winter. The laboratory building for the school of mines at Socorro is in course of erection, but will not be ready for use until the fall of 1892.

Particular stress is laid by the governor upon the unsettled eastern boundary line of New Mexico, which separates it from Texas and No Man's Land. This line is fixed at the one hundred and third meridian, but the exact location of that meridian has never been definitely settled. The consequence is that a considerable strip of land is claimed by both New Mexico and by Texas. It becomes a place of refuge for criminals and interferes with the administration of justice. It is recommended that an appropriation may be requested to fix and mark this line.

The proposition made one year ago to establish a national park on the Upper Pecos along its upper waters is again strongly urged. Dr. Duncan, president of the American Health Resort Association, who has recently visited New Mexico, says: "We believe it will be wise, especially from a health point of view, if the upper waters of many of the rivers, especially the Pecos, were set apart as a national park. A notable fact in this connection is that the percentage of deaths from pulmo-

nary disease is lower than at any other point from which we have statistics."

IRRIGATION.

The system of redeeming the arid lands by irrigation is being vigorously continued. The estimate is made that it takes 1 cubic foot of water running day and night to irrigate 160 acres. The average cost per acre for water in San Juan County is about 75 cents. More than fifty companies have been organized for irrigation purposes and several are already in operation. The waters of the Pecos River, the Rio Grande, the Cimarron, the Vermigo, La Plata, and other rivers are being utilized.

AGRICULTURE AND HORTICULTURE.

During previous years large quantities of hay, corn, wheat, oats, etc., were imported. These imports have stimulated the people to home production, and in every locality the acreage of every staple product has been increased, and new ditches will still further increase the product next year. New fields of grain and grass appear in every direction. Three crops of alfalfa are harvested in the north and four in the south.

The advance is even more noticeable in horticulture. The fruits of the temperate zone arrive at perfection with a flavor that is unexcelled anywhere. The industry is new, but the product is rapidly increasing. Numerous orchards are being planted all over the territory, and it is estimated that 200,000 fruit trees were planted during the year.

The number of cattle returned for taxation in 1890 was 1,129,088, and owing to some severe losses during the winter the number has probably not increased during the year.

From January to August, 1891, 2,200 cattle were taken into the territory; and from March 15 to August 1, 59,000 were shipped, 10,283 were driven out, and 5,891 were slaughtered.

The mining industry has increased throughout the whole territory. The benefit of the tariff act upon the lead industry is plainly seen in all the camps where this ore can be found. The total mineral product of the territory for 1890 was almost exactly \$3,000,000. The production of silver has been stimulated also. Increased facilities and more extensive plants have been introduced and smelting is now being done extensively where formerly ores were shipped away to be reduced. The largest bed of gypsum in the world, containing more than all others known to exist, is in Doña Ana County. Many precious stones, such as rubies, amethysts, topazes, and lapis lazuli are found in the mountains and are already gaining a reputation among eastern lapidaries.

FORESTS AND LUMBER.

The extension of the Union Pacific Railroad into the Red River country and on the Maxwell grant brought into market about

200,000,000 feet of spruce and pine timber, and there are now seven mills in operation cutting about 3,000,000 feet per month. Besides the sawed lumber there are about 20,000,000 ties and other timber already within reach and the extension of roads will open up other large and valuable tracts. In other sections and upon other grants vast quantities were cut during the year. Twenty million feet were cut from the Tierra Amarilla grant.

There has been a revival of railroad building during the year and the present mileage in the territory now aggregates 1,445.45 miles.

The condition of the Indians is represented to be that of progress and prosperity. They are turning their attention to agriculture and sending their children to the schools. The children make rapid progress in the schools and many of them have shown marked ability. But a compulsory educational law is strongly recommended as the only solution of the Indian problem of the territory.

It is recommended that the Jicarilla Apache Agency be made independent with an agent of its own.

Some of the Indians wish to attend the World's Fair and make an exhibition of their own products.

The governor recommends that, for the moral effect of their presence, Fort Marcy should be reoccupied by at least two companies of troops unless the district composed of New Mexico and Arizona is to be re-established with headquarters at Santa Fé.

In closing the report the governor says:

The future of the territory is not only assured but the full fruition of its prosperity is near at hand. Already we are enjoying the first fruits of the new era of progress. We are producing far more and buying much less this year than last. With a little increase we will soon bring the balance of trade to our own side. No more propitious time for new citizens to take part in our manifest destiny can be imagined. The night of waiting is far spent; the day is at hand. And New Mexico welcomes all worthy men and women to join us in the pleasures and prosperity of that day.

UTAH.

The population of Utah, by the census of 1890, as corrected, is 207,905. From the governor's report for the year 1891, it appears that since the census enumeration was made, as shown by the assessors' returns for 1891, there are now 210,762 people in the territory, an increase over last year of 2,857. He suggests that the assessors' returns show that a number of precincts are missing, and he estimates the population to be about 215,000.

The immigration to the territory during the past year is about 2,000, and has come mainly from English and Scandinavian countries.

The increase in the value of property of cities and towns over 1890, as shown by the assessment rolls, is 15.7 per cent. The total assessed value of property, real and personal, was in 1890 \$104,758,750, and in

1891 \$121,146,648.37, showing an increased assessed valuation of \$16,387,898.37, or 15.65 per cent, during the year.

PUBLIC LANDS.

The acreage and settlement of public lands, from the opening of the land office in March, 1869, to June 30, 1890, amounted to 21,193,325 acres; during the year ending June 30, 1891, this was increased to 21,887,642.29 acres.

The governor again calls attention to the vast extent of unoccupied land, which amounts to nearly 31,000,000 acres, owned by the government.

Under the law of October, 1888, sites for reservoirs have been reserved, upon which water may be stored to be used for agricultural purposes. Of the total amount of arid government land situated in this territory only about 735,226 acres can now be irrigated. The amount which could be irrigated, if the necessary work is done to increase the water supply, is about 2,304,000 acres. The question of the irrigation of these lands, by means of a systematic and comprehensive plan of storing the surface water for use, is one of growing importance.

The Secretary has in the first part of this report dwelt upon this subject as one of national interest.

SCHOOL LANDS.

The total grant to the territory of school lands is 46,080 acres, but since the water supply available has been largely appropriated by settlers for use on their lands, when the school lands are offered for sale there will be no water to use upon them, and this will render the greater part of them practically valueless.

It is suggested that the grant should be increased, and the legislature should be authorized to take some action respecting the sale of lands heretofore granted.

PUBLIC BUILDINGS.

The demand for a public building for federal offices at Salt Lake City is again urged for the protection of the public records.

The addition to the Utah penitentiary, provided for by Congress, has been completed, according to plans and specifications, at a cost of \$95,000.

The Deseret University since being opened has advanced rapidly in popular favor, and the attendance for the coming year will be the largest in its history.

On June 24, 1891, the building occupied by the Reform School was greatly damaged by fire, but is being rebuilt.

The Industrial Home and Agricultural College is mentioned favorably in the report, and appears to be in good condition.

INDIANS.

Referring to the Indians, it is reported that appropriations should be made for the temporary support of the Indians in Tooele County, who are anxious to own their land, and those in Garfield, San Juan, Sevier, Kane, and Iron counties. At the last session of Congress \$10,000 was appropriated for the relief of the Shebit Indians, in Washington County, Utah. The law provided that the money should be used for their temporary support and to enable them to become self-supporting. Similar appropriations, he suggests, should be made for the Indians of the counties above named.

Vigorous protest is made against the proposed removal of the Colorado Utes to Utah. The lands embraced within the limits of the proposed reservation, to which the Utes were to be removed in San Juan County, were withdrawn from entry on November 15, 1885. The governor urges that this withdrawal be revoked and the land again thrown open to settlement.

STOCK, MINING, AND OTHER INTERESTS.

The live-stock industry is shown to be in a prosperous condition. During the last year a corporation has been formed for the purpose of establishing stock yards and packing houses at Salt Lake City, and is now engaged in preparing the land purchased for use.

The yield of gold, silver, and lead during the last year has been larger than ever before. The increase over 1890 in pounds of unrefined lead is 6.33 per cent; in pounds of refined lead, 115.33 per cent.; ounces of silver, 14.10 per cent; ounces of gold, 35.53 per cent. Decrease in pounds of copper, 115.40 per cent. The increase in the production of salt in 1891 over that of 1890 is 78.44 per cent. It is estimated that the veins of asphalt found in Utah will, when fully developed, be sufficient to supply the asphalt for the paving of all the streets in every American city, and continue to do so for a long period of time to come. Vasts beds of coal, iron, and other valuable minerals are awaiting development.

SCHOOLS.

Under the influence of the free-school law, which first went into operation two years ago, there has been a marked increase in the attendance of pupils, and a visible improvement in the methods and manner of teaching. In 1890 there were 94 schools under the management of religious denominations other than the Church of Jesus Christ of Latter-Day Saints; 7,807 pupils attended these schools. In 1891 there are 88 schools, attended by 6,904 pupils. This decrease in attendance is owing to the establishment of free nondenominational schools.

FINANCES.

The finances of the territory are shown to be in good condition. A bank statement from a number of banks, showing the condition of their

business June 30, 1891, as compared with the same date, 1890, shows a great increase in the capital employed and a slight decrease in the amount of deposits.

RAILROADS.

There are now 1,187.4 miles of railroad in the Territory. The Union Pacific lines alone carried about 1,929,695,766 pounds of freight during the year ending June 30, 1891, showing an increase of tonnage handled of 148 per cent.

POLITICAL.

At the election for Delegate to Congress, held November 4, 1890, the candidate of the People's party, or Mormon party, was elected over the candidate of the Liberal party, non-Mormon, by a majority of 9,411 votes. The successful candidate received 16,353 votes and the defeated candidate received 6,912 votes.

A municipal election was held in Ogden in February last, at which the Liberal party, non-Mormon, elected its candidate. Since that time an election has been held for the legislative assembly. Previous to the election the People's party (Mormon) had formally disbanded, and its members commenced to unite with the Republican and Democratic parties. It resulted in the election by the Democrats of a majority of the assembly.

On September 24, 1890, the president of the Church of Jesus Christ of Latter Day Saints declared that plural marriages were not encouraged nor solemnized by said church, and calling on members thereof to refrain from contracting any marriage forbidden by the law of the land. At the general conference of the church, held soon after the date of the president's letter, his action was indorsed, and again, on October 6, 1891, the general conference reaffirmed the action of the former conference. The Governor states that their action seems to be sincere and should be regarded as such, until there is good reason for thinking otherwise.

As an indication that the church is sincere in their recent efforts to prevent plural marriages, it is stated in the governor's report that the People's party, which has always been the Mormon party, has been formally disbanded, and that everything indicates that party lines between the two great national political parties, already organized, would be closely drawn were it not for the fear held by some members of the Liberal party, non-Mormon, that the Mormon Church and the People's party are not sincere in their recent efforts to abandon plural marriages, and have put forth those efforts for the purpose of formally showing their intention of submitting to the law of the land in order to induce statehood, when the church would again step forth and assume the administration of state affairs. He remarks that it would seem that this distrust of motives is unfounded.

The Utah Commission is commended by the governor, who states that in its sphere it has performed efficient work, and has been a valu-

able auxiliary to the work of other federal departments in Utah. It is the desire of the non-Mormons of Utah that the Commission shall be retained.

UTAH COMMISSION AND THE MORMONS.

After discussing the different elections that have taken place in Utah, the report of this Commission gives valuable tables showing the registered voters in the different portions of the territory and a summary of the votes cast at the different elections mentioned. The report then goes on to say that a new condition of political affairs has confronted the people of Utah; that the "People's Party" having officially been declared disbanded by its territorial committee, that committee announced that for the future an alliance would be sought with the two great national parties; but while this action was hailed by some as an end that had long been looked for, others deemed it but a ruse through which the leaders of the Mormon Church were seeking statehood, well knowing that their large majority would control the State when formed. The Commission discusses this matter extensively, leaning strongly in its conclusions against the sincerity of the Mormon Church in its declarations as to polygamy and the honesty of its purpose in making these political connections. The governor of the territory, in his report, as may be seen, does not concur in these opinions.

The Commission states that the church has through the "People's party" strenuously opposed every effort made, whether by laws of Congress, the action of the courts, or of the Utah Commission, to put down polygamy; that it has appealed to the courts, generally going to the court of last resort, upon every question that could be raised to sustain its assumption that it was justified in obeying the alleged will of God expressed through daily revelation vouchsafed only to themselves, as against the revealed will of the nation, expressed through its laws; that it has denounced the Commission through all the years that it has been administering the laws directed against polygamy, and kept a united force constantly standing and ready to oppose every effort to compel its submission to the laws of the land; and the Commission expresses the opinion that it will do no harm to Utah or to the nation to wait a while and see what this sudden conversion will bring about.

The Commission defends its report of 1890, wherein it is stated that—

The Commission is in receipt of reports from its registration officers which enumerate 41 persons who, it is believed, have entered into the polygamic relations in their several precincts since the June revision of 1889.

This is the report assailed in the manifesto of President Woodruff.

The Commission restates the fact that three additional cases were reported a few days after the report was formulated which should be included in it, and adds that, notwithstanding the manifesto, "reports have been received by the Commission of eighteen male persons, who, with an equal number of females, are believed to have entered into

polygamous marriages during the year." The names of the officers reporting the cases are withheld for fear that they would be persecuted if it became known. The number of cases that have come under the cognizance of the courts since September 1, 1890, involving the offenses defined in the acts concerning polygamy and other kindred crimes, is as follows: Indictments found, 188; convictions, 109; acquittals and dismissal, 107; awaiting action, 41. The number of cases reported from the United States Commissioners for the same period of time is as follows: Indictments found, 426; held to bail, 308; discharged, 118.

Jacob Johnson, of Spring City, also reports that he has pending now in his court 23 cases, as follows: Unlawful cohabitation, 18; polygamy, 1; adultery, 4.

Such facts the Commission asserts compel the conclusion that polygamy is not yet "a dead issue." Nevertheless, the declaration of the church is accepted as a progressive step, and the Commission expresses the hope that "time may bring from it fruit which will gladden the heart of the nation."

The Commission recommends that the protection and fostering hand of the government be not withdrawn, and is most emphatic in expressing its opinion that it would not at this time be safe to intrust to this people the responsibilities and duties of statehood, as they so much desire.

MINORITY REPORT.

The minority report of John A. McClelland recommends that the frequent and varying intervals of elections should be remedied, not only for the sake of convenience and economy, but to avoid cheapening suffrage by its too frequent use. This commissioner states that according to what seem to be trustworthy reports, registrars have denied registration to eligible persons, or have stricken the names of such persons from the registry, simply upon the ground that they had, at a former time, contracted plural marriages, and must therefore unavoidably continue to be polygamous until death, pardon, or amnesty comes to relieve them. He hopes that an adequate and effective remedy may be found for these alleged abuses.

This Commissioner also proposes that the Commission shall be authorized to issue instructions that shall be binding on the registrars, and that election judges shall, exclusively, be authorized to deal with all objections or challenges to the right of persons to be registered or to vote; or that an intermediate tribunal between the election judges and the registrars shall be established with exclusive jurisdiction for that purpose, and that any willful act of the registrar improperly hindering, or any neglect of duty by him delaying the lawful effectuation of the right to be registered or to vote, or any willful or unauthorized act committed or omitted by him in his capacity as registrar, shall, in any such case, be deemed a punishable offense.

This Commissioner also reports as follows:

The legislative assembly of the Territory, at its session in 1890, resolved that it was "in favor of a just, humane, and impartial enforcement of the laws" against sexual offenses "in the same manner that other criminal laws are enforced under the Constitution and laws of our country to the end that such offense may be effectually prevented." At the same session the assembly passed a law "regulating marriages," elaborately devised and bristling with penalties against any inroad by polygamy.

The official evidence of the decrease of plural marriages since the 1st day of September, 1890, comes through the district judges in the Territory.

Justice Blackburn reports that there has been but one conviction had in that time for polygamy in the district court held at the city of Provo.

Justice Miner reports only one such conviction had in the district court in the city of Ogden.

Justice Zane reports one conviction had for polygamy in the district court held at Salt Lake City, and that conviction was not of a Mormon.

Justice Anderson reports one conviction had for that offense in the district court held at Beaver City.

SEMI-ANNUAL CONFERENCE OF LATTER-DAY SAINTS.

Since the publication in the newspapers of the report of the Commission there have been very strong expressions made by the elders of the Mormon Church at the semiannual conference held at Salt Lake City, Utah. There were many speakers who addressed this assembly, which resulted in the passage of a preamble and resolutions, a copy whereof is annexed to this report (Appendix H), the substance of which is that the Church of Jesus Christ of Latter-Day Saints in general deny that the church dominates its members in political matters, or that the church and state are united; and that their fealty henceforth will be to such national political party as seems to them best suited for the purposes of republican government; that they do not believe there have been any polygamous marriages solemnized among the Latter-Day Saints during the period named by the Utah Commission; that they believe that the manifesto of President Woodruff adopted at the last October conference forbidding plural marriages has been carried out in letter and spirit.

There was also a declaration received and indorsed, signed by Wilford Woodruff, George Q. Cannon, and Joseph F. Smith, constituting the first presidency of the church, which was read by Hon. John T. Caine, repeating in the most solemn manner the declaration made by President Woodruff at the general conference held in October last, that there have been no plural marriages solemnized during the period named.

STATEHOOD.

There is no such claim for statehood found in any of these papers, or probably existing, as needs in the judgment of the Secretary a favorable recommendation to Congress.

It is a period of very decided and important change, not only in the religious belief, as proclaimed, of a very large part of the population of

Utah, but also of new political affiliations, and apparently of more or less passion and tumult. It would seem best to delay national action. The territory is progressing most favorably in material wealth and social elevation. It is prospering under its present conditions, and no doubt the time will come when it may be admitted into the Union with pride and safety; but it is believed that that time is not now at hand.

OKLAHOMA.

The first annual report of the governor of the new territory of Oklahoma presents some interesting facts.

In May, 1890, the population was found to be, exclusive of Greer County, 60,417, of which 57,117 were whites, 3,289 colored, and 11 Chinese. The governor estimates the population now to be 80,000.

An election was held on August 5, 1890, and on August 27, 1890, the first legislative assembly of the territory met for a session of 120 days at Guthrie, and a very fair code of laws was enacted.

When the governor arrived in the territory, thirteen months after it was opened to settlement, prosperous little cities and towns had been built, and every quarter section of land opened to settlement was occupied. The dry weather of 1890 was, however, very disastrous to the growing crops, and the resources of the people were almost exhausted; but relief came through Congressional aid and from the several railroads extending through the Territory. The Atchison, Topeka and Santa Fé and the Chicago and Rock Island railroads furnished seed wheat along their lines to the settlers at actual cost, free transportation, and to be paid for, without interest, out of the crop of this year. The wheat sown yielded from 20 to 30 bushels to the acre.

Corn, cotton, and other crops have yielded bountifully, and the country is admirably adapted for raising fruit and berries. The agricultural statistics show that during the current year there have been under cultivation in wheat about 28,000 acres; corn, 85,675 acres; cotton, 30,686 acres; oats, 7,770 acres; Hungarian grass and millet, 5,125 acres; sorghum, 14,930 acres; potatoes, 2,000 acres; rye, 1,317 acres. Besides these there were cultivated castor beans, tobacco, flax, buckwheat, peanuts, etc. Several hundred thousand fruit trees and vines have been planted, and many acres are already set out in berries.

From February, 1890, to February, 1891, the value of the wool marketed was \$24,259 and the value of the animals fattened and sold was \$51,237.

Stock-raising is not engaged in to any extent except in Beaver County (formerly No Man's Land), which seems as yet to be too far beyond the rain belt to be relied upon for agricultural purposes.

But little attention has been given to the development of mining, although some fine specimens of lead and silver ore have been found; also coal, coal-oil, asphaltum, and mineral paint of a superior quality.

While Oklahoma is not classed as a timber region, yet, if properly protected, there will be abundant supply for years to come of walnut, oak, pecan, and hickory, and a large variety of timber.

Under authority of the act of March 3, 1891, and under the direction of the Secretary of the Interior, the governor has leased 584 out of the 656 quarter sections of school lands in six counties outside of Beaver for three years, for an aggregate of \$52,206.67.

The act of May 2, 1890, appropriated \$50,000 to be used in temporary support and aid of common-school education in the territory, as soon as a system of public schools should be established by the legislative assembly. Of this sum about \$38,000 has been expended for the salaries of teachers and for school supplies, but none of it was used for building schoolhouses nor for any other purpose. The balance of about \$12,000 will go to teachers in districts where they had no schools at first, or did not have full terms. There are 400 school districts organized, with 9,893 pupils enrolled and 438 teachers employed. Sixty-five schoolhouses were built during the year ending June 30, 1891, at a cost of \$8,143.35.

Opening of the Cherokee Outlet is strongly recommended. It is urged also that before any other lands are thrown open to settlement the town sites should be carefully selected, surveyed, platted, and published. He states that in the mad rush made for lots, at these openings of town sites, many intending settlers are deterred and debarred by those who go purely for speculative purposes. He thinks provision should be made to prohibit going into reservations at the opening to settlement other than on foot, to avoid the danger incident to riding on horseback or in vehicles, and suggests that if the lots were sold, even at a low valuation, those who really intend to settle, for business or for home, may thus buy their property at a reasonable price, and those who go for speculative purposes may take their chances. The funds arising from such sales could be used for the improvements of streets and digging town wells, and the balance go to the school fund.

The governor says that the refusal of a great many Indians among the Cheyennes and Arapahoes to take their allotments of land has caused much delay and that the appropriation for making these allotments is practically exhausted; and great hardships will be inflicted upon many hundreds of settlers, who are hovering around the borders waiting for homes, unless arrangement is made to open these lands in the spring. If they are unable to raise a crop next year it will mean destitution, hardship, sickness, and death to many of them, as they have come from the North, East, and South, broken up their homes, and in many instances would be unable to return if they so desired. The Indians now want their allotments and the situation is represented as an emergency demanding the prompt action of Congress, in order to give relief to the settlers and to provide new homes for the Indians.

ALASKA.

The report of the governor of Alaska presents some interesting facts and recommendations about that vast and as yet undeveloped territory.

With an area of 580,000 square miles, nearly one-sixth of the whole territory of the United States, it embraces numerous lofty mountain chains and valleys, extensive plains, and dense forests. The forests abound in timber, of which the value is yet unknown. Besides the mainland there are 1,100 islands, varying in size from a few acres to hundreds of square miles in area. Among these islands, and extending far into the mainland, are numerous deep-sea channels and immense rivers, which serve as the highways of travel and commerce, and without which communication with a large part of the territory would be almost impossible.

In any estimate of the future development and progress of the territory, the climate must be taken into consideration.

The snow-capped mountains and glaciers, the extensive seacoast, the warm ocean currents, and the broad plains of the northland contribute to the wide diversity of climate which exists. The interior exhibits extremes of heat and cold, with long winters and short summers, and has a dry atmosphere through all seasons. Along the coast lines however, and among the group of islands, a wide range of climate is found, from the mild and equable conditions imparted to portions of the coast by the Japanese current, to the severe Arctic blasts of the higher latitudes beyond the Yukon River, where in winter the mercury ranges from 50 to 70 degrees below zero.

The population is about 33,000, the census enumeration being necessarily inaccurate by reason of the desertion of the villages for the hunting and fishing grounds during the summer time. The white population is nearly one-half foreign born. The native Indians are more settled, reliable, and intelligent than the Indians of the plains. They live in fixed abodes and are independent and self-sustaining. They have made great strides towards American civilization, and their progress may be facilitated by the continued liberal aid of the government in the matter of education and in the protection of their legal rights.

LEGAL STATUS OF INHABITANTS.

The governor earnestly discusses the imperative necessity for the adoption by the government, through legislation, of some fixed and definite policy as to the true legal status of the native Alaskans, and the determination of the question, freed from the conflict of authority of judicial decisions, whether they continue to sustain their tribal relation with a divided fealty, or whether they are subject, as individuals, to the jurisdiction and laws of the United States alone. The treaty which adds Alaska to the United States is referred to as evidence of

the guaranty of citizenship to all, except the uncivilized tribes who should not return to Russia within three years. It is shown that the Russian government construed that all who joined the Russian church became citizens of Russia. It is urged that the complications which have arisen call earnestly for a positive definition of the legal status.

There is very little taxable property in Alaska. None of its products, except what are consumed in living, are retained within its border. Its annual exports exceed the imports by nearly \$7,000,000. Its manufacturing and producing business is carried on with foreign capital, and with imported laborers who leave the country when the season is over. Its carrying trade is done in foreign ships. No internal improvements are constructed and nothing is left in the country that can be carried away.

The Pacific Coast Steamship Company controls largely the carrying business of southeastern Alaska. Some of the items of export were 688,332 cases of salmon, worth \$2,752,328; 231,282 pounds of whalebone, valued at \$1,503,333; 21,596 fur seals taken under lease (estimated), \$1,000,000.

FISH.

Salmon fishing is by far the largest industry, and the exported product since 1882 has amounted to the value of over ten millions of dollars in canned goods, besides a large trade in salted fish, which amounted in 1890 to 7,300 barrels. This industry gives employment to about 5,500 men and requires 100 steam vessels and 500 fishing boats. Cod fishing is also an important industry. Since 1865 the value of this export has been \$12,861,650. Herring fishing is carried on by the Alaska Oil and Guano Company for the manufacture of their products, which amounted in 1890 to 157,000 gallons of oil and 700 tons of guano.

SEALS.

The North American Commercial Company has succeeded to the lease formerly held upon these islands by the Alaska Commercial Company. The number of seals taken by the former company in 1890 was only 21,596, or considerably less than one-fourth of the average of the eighteen years preceding. This falling off is accounted for in three ways: First, by diminution in the number of seals visiting the islands through indiscriminate slaughter of females in the open sea, and from other causes; second, the seals came later than usual and the killing was stopped earlier than usual, on July 20 instead of August 1; third, during the last two years of the Alaska Company's lease the difficulty of procuring the number allowed then induced the killing of younger animals than formerly. Attention is called to the danger to which this most valuable industry and fruitful source of national income is exposed by the illegitimate and indiscriminate slaughter of seals, female and the young as well as bulls of proper age, in the open sea.

MINERALS.

The governor states that the estimate of \$1,000,000, as the value of the product of gold and silver is probably less than the actual amount. Many discoveries of rich ore and placer deposits have been made within the year. There are in Alaska fifteen plants having mills for crushing ore and having the equipment for securing free gold and obtaining the sulphurets in a compact form for shipment.

Placer and hydraulic mining are being conducted on a more extensive scale and with promise of better results than heretofore. Coal, copper, cinnabar, iron, marble, granite, and nephrite are also abundant, but are not being largely developed as yet.

LANDS AND TIMBER.

Titles to land were withheld until the law of March 3, 1891, and the governor reports that as yet no lands had been taken under that law. Dense forests and an abundance of timber are found in Alaska except in the mountain ranges above 1,500 feet, in the low country bordering on the Bering Sea and Arctic Ocean, and in the western part of the peninsula and Aleutian Islands. Spruce, hemlock, cedar, birch, and poplar are the principal growths. The lumber business is much harassed by the unfortunate condition of land titles. The depredations reported during the year 1890 amounted to over 10,000,000 feet, worth \$250,340. There are thirteen mills for the manufacture of lumber, but those who have attempted to supply the demand for lumber from the territory are now involved in suits for these timber depredations.

Reports from various sections of the country, where different conditions are known to exist, lead to the conclusion that the agricultural and stock-raising facilities of the territory are not unimportant, but the conditions of soil and climate are such that development must be slow. Berries and garden vegetables are grown in great abundance in some sections. The Kadiak district is said to be adapted to stock-raising. The winters are mild and the grass grows to a great height and furnishes pasture sufficient to fatten the cattle and sheep all the year round.

SCHOOLS.

The management of the schools has been transferred from the territory to a general agent, who, with his assistant, is connected with the Bureau of Education at Washington. The agent makes an annual cruise, visiting the available points. There are in all seventeen government day schools, an increase of four over the previous year, besides which school contracts have been made with several of the mission schools. The teachers employed have done their work conscientiously and well. The want of a compulsory-attendance law is said, however, to be severely felt.

The governor thinks that the best educational work has been done

by the missions and churches. Two industrial training schools are reported to be doing excellent work. It is urged that the management of the schools should be local, and that a year of experiment, with the management 4,000 miles away, confirms this opinion. He recommends a territorial board of public instruction, or some similar local organization, to be appointed by the Secretary of the Interior and to be under the direction of the Commissioner of Education.

PUBLIC BUILDINGS.

A detailed statement of the public buildings is given. Most of these belong to the time of the old Russian regime. It is submitted that a universal sentiment appeals for the rehabilitation of the old Russian governor's residence at Sitka, and its preservation as a relic of the past; at the same time it should be made useful for official residences or other government purposes. It is now used as a court-house and a residence for the Commissioner. It is further recommended that the government wharf at Sitka should either be opened to free use, or that such reduction should be made in the fees for wharfage as would yield simply a sufficient sum to keep the wharf in repair. The settlements in Alaska are mostly upon the shores, and travel and transportation are almost entirely by the use of water craft of some kind. No railways have been built, and there are no wagon roads of importance.

MAIL FACILITIES.

There are only eighteen post-offices reported as yet in the whole Territory, and until recently the Alaska Commercial Company served the public as mail carriers without compensation. In 1890 their Unalaska office delivered 2,200 packages of mail to individuals, besides many unbroken packages to vessels and also received and mailed 3,000 packages at San Francisco. Other companies and all vessels coming from San Francisco carried and delivered mails. The official order of the Post-Office Department, on May 18, 1891, authorizing a contract for mail service monthly, from April 1 to October 31, in each year, until June 30, 1894, on route 78,099, Sitka by Yakutat, Nutchek, Kadiak, Unga, Humboldt Harbor, and Belkofsky, to Unalaska, has been received with much rejoicing by the people.

COURTS.

The courts of Alaska consist of the United States district court and four commissioner's courts. A large proportion of the criminal business of these courts grows out of the importation and sale of intoxicating liquors. The governor, collector of customs, and United States district attorney are all charged with certain duties looking to the control of this traffic, but the condition of the country, the want of proper transportation facilities, the insufficient executive equipment of

the local courts, the expense of transporting court officers and jurors, the inflexibility of the laws applicable to the territory, the absence of sufficient police supervision, and numerous other causes tend to negative the efficiency of the powers conferred upon these officials.

Some valuable suggestions are submitted by the governor, by the district attorney, and by Judge John S. Bugbee, of the United States district court, recommending certain amendments and modifications of the laws now governing the territory. In concluding his report the governor submits suggestions as to the revision of these laws; also that provision be made for the incorporation of municipalities and for holding elections; for government hospitals for treatment of natives afflicted with chronic and hereditary diseases, and for insane persons and paupers; for better transportation facilities to be used by the government in the performance of official duty; for the establishment of agricultural experiment stations, and the expedition of the coast surveys; for an increase of commissioners, deputy marshals, and justices of the peace, and of jails and lockups; for the definition by legal enactment of the exact legal and political status of the native population.

In these recommendations the Secretary most heartily concurs and requests that the attention of Congress be directed to the necessity of some efficient system of trial and punishment of offenders against the laws regulating the liquor traffic in particular. The evils are very great and the enforcement of such laws as exist is almost impossible.

HOWARD UNIVERSITY.

By act of March 3, 1891, this university is required to report how the appropriation is expended.

The appropriation of \$25,800 made in sundry civil act, August 30, 1890, was expended as follows:

For part of salaries of officers, professors, teachers, etc., balance paid from donations and other sources, \$20,300.

The appropriation for repairs of buildings was used as follows:

Repairs to heating apparatus, lumber, paints, oils, etc., plumbing, wages of mechanics and laborers, total amount, \$2,400.

In addition to this there was expended from other funds of the university, for repairs of buildings, \$3,392.95.

The appropriation of \$500 for chemical apparatus was expended by the professor of chemistry, under the direction of the president of the university, in the purchase of apparatus for the use of that department, after due advertisement in the Washington papers for proposals.

There was expended for improvement of grounds of the university (principally in grading) the sum of \$1,439.84, of which \$1,000 was paid by the United States.

The appropriation for the industrial department was expended for fuel, equipment for bookbindery, supplies for bookbindery, printing

press and type, hardware, lumber, other supplies (sewing and drawing) instructions, janitor, and fireman, total \$4,000.

COLUMBIA INSTITUTION FOR THE DEAF AND DUMB.

The pupils remaining in this institution on the 1st of July, 1890, numbered 81; admitted during the year, 29; since admitted, 23; total, 133. Under instruction since July 1, 1890: Males, 92; females, 41. Of these, 66 have been in the collegiate department, representing twenty-four States and Canada, and 67 in the primary department.

There have been, since July 1, 1890, 23 blind persons as beneficiaries of the United States in the Maryland Institution for the Blind, at Baltimore.

There have been 15 feeble-minded children belonging to the District in the Pennsylvania institutions at Elwyn.

The provision made by Congress for the care and training of this latter class of persons is insufficient, and the importance of enlarged appropriations is earnestly urged upon the attention of Congress. At least \$5,000 should be appropriated next year for this object. This is cheerfully recommended to your favorable consideration.

The general health of the pupils has been good during the year.

The receipts and expenditures for the year under review will appear from the following detailed statements:

SUPPORT OF THE INSTITUTION.

Receipts	\$64,735.84
Expenditures	63,149.58
Balance	1,586.26

Congress at its last session added to the usual amount provided for current expenses the sum of \$3,000 for the expense of instructors of articulation. This addition to the resources of the institution was intended to enable the directors to offer instruction in speech and lip-reading to the students of the college, but the amount appropriated was not sufficient to provide fully for the teaching of so large a number.

The appropriation can, however, be supplemented by a small fund at the disposal of the directors, and they have therefore made arrangements which they believe will secure the great boon of oral instruction to all the students of the college, at least for the current year.

Prof. Gordon, of the faculty, who was a well-trained teacher of speech to the deaf for several years before coming to Washington, has been placed in charge of the department of articulation, and other teachers have been assigned to his assistance.

The following estimates for the fiscal year ending June 30, 1893, have already been submitted: For the support of the institution, including

salaries and incidental expenses, for books and illustrative apparatus, and for general repairs and improvements, \$61,000; for special repairs and improvements \$6,000, divided as follows: For the proper inclosure, care, and improvement of the grounds of the institution, \$3,000; for repairs of buildings, including repairs of heating apparatus, plumbing, and sewerage, \$3,000.

The estimate for current expenses is the same in amount as the appropriation for the present year.

In the sundry civil bill of March 2, 1889, it was enacted:

That one-half of all expenses attending the instruction of deaf and dumb persons admitted to said institution from the District of Columbia, under section 4864 of the Revised Statutes, shall be paid from the revenues of the District of Columbia, and one-half out of the Treasury of the United States, and hereafter estimates for such expenses shall each year be submitted in the regular estimates for the expenses of the government of the District of Columbia.

For two years separate estimates for the expenses of beneficiaries of the District of Columbia have been submitted, and the sum of \$10,500 has been appropriated each year for such expenses. But to show exactly what part of the fuel, gas, provisions, wages, salaries, etc., paid for in carrying on the institution has been for the benefit of the pupils from the District is extremely difficult, not to say impossible. And still more difficult is it to furnish separate vouchers for these articles and services.

In point of fact it has been found impracticable to account separately at the Treasury for these expenditures, which, in the aggregate, are accounted for without difficulty. It is therefore recommended by President Gallaudet that hereafter the whole amount for current expenses be appropriated in the sundry civil bill, and that a proviso be added requiring the president of the institution to report to the accounting officers of the Treasury Department at the end of each fiscal year the cost of educating the beneficiaries from the District, as nearly as this can be ascertained. The proper proportion can then be charged to the District treasury.

The second estimate is to provide for repairs and improvements, the need for which has been growing more and more urgent for several years, some of these having now become matters of pressing necessity.

No special appropriation for repairs has been made for a number of years, and it has been necessary to leave many things in a condition far from creditable. These are enumerated in the report of the president.

The second item in the estimate for repairs and improvements will certainly be not more than enough to provide for exterior and interior painting, pointing up and cleaning stone and brickwork, repair of heating apparatus, plumbing and sewerage. In many portions of the building there is the prospect of actual damage and loss if the repairs indicated are not speedily made.

The management sustained a severe loss in July last through the death of Robert C. Fox, LL. D., for ten years secretary of the board of directors and auditor of accounts.

MARYLAND SCHOOL FOR THE BLIND.

The number of pupils from the District of Columbia (admitted through this Department) remaining in the school at the end of the last year was 21; during the year 3 were admitted and 3 discharged or withdrawn, leaving 21 under instruction at the close of the year; of this number 5 are colored.

The list of studies embraces those usually taught in the elementary schools. Instruction is given also in music (vocal and instrumental), piano tuning, mattress and broom making, and chair caning. The superintendent of the institution reports that the progress made by the District pupils during the year was quite satisfactory.

EDUCATION OF FEEBLE-MINDED CHILDREN.

At the close of the last fiscal year (1890) 10 children from the District of Columbia were receiving education and support in the Pennsylvania School for Feeble-Minded Children; 6 were admitted and 1 discharged during the year, leaving 15 at the end of the year.

The president of the Columbian Institution for the Deaf and Dumb, upon whose certificate, as provided in the act of June 16, 1880, the Department authorizes admission to the benefits of the act, states in a report of a recent visit to the school that he made a careful inspection of the mental condition and the progress in education made by the Government beneficiaries now in the school; that he found them well cared for, and the institution a model of enlightened and humane management. Four of the District pupils have shown such satisfactory improvement that they are now able to perform useful labor, in consideration of which the superintendent of the school is willing to reduce the charge for their education. With this reduction, and upon the withdrawal of two of the Government beneficiaries who are found to be incapable of mental improvement, it will be possible for the Department to comply with requests for the admission of four worthy applicants, which have been necessarily refused owing to the inadequacy of the appropriation to provide for them.

WASHINGTON HOSPITAL FOR FOUNDLINGS.

Sixty-five children were received into this institution during the year. Twelve were withdrawn by adoption and placed in comfortable homes. The number remaining in the hospital June 30, 1891, was 34.

The receipts for the year were as follows:

United States appropriation	\$7,000.00
Entertainments	763.10
Dues and contributions	875.25
Miss E. P. Martin (legacy).....	500.00
Endowment fund	241.20
C. B. Bailey	3.00
Total	9,182.55

The expenditures amounted to \$8,575.34.

FREEDMEN'S HOSPITAL.

The following table shows the work of this institution:

	White.			Colored.			Grand total.
	Males.	Females.	Total.	Males.	Females.	Total.	
Remaining June 30, 1890	24	10	34	89	109	198	232
Admitted	392	92	484	802	879	1,681	2,165
Born	3	4	7	99	102	201	208
Total	395	96	491	901	981	1,882	2,373
Total in hospital	419	106	525	990	1,090	2,080	2,605
Discharged	371	99	461	759	884	1,643	2,104
Died	24	8	32	140	98	238	270
Stillborn	1	.....	1	12	10	22	23
Total	369	98	464	911	992	1,903	2,397
Remaining June 30, 1891	23	8	31	79	98	177	208

The whole number of patients treated in the hospital was 2,605; of this number 2,080 were colored and 525 white; the colored males numbered 990; colored females, 1,090; white males, 419; white females, 106.

There were 307 surgical operations performed. In the dispensary 3,904 patients were treated. Upon the recommendation of the Commissioner of Pensions 106 ex-soldiers were admitted and treated.

The report is accompanied by tables giving a comprehensive statement as to patients, diseases treated, causes of death, nativity, occupation, etc. More than one-third (95) of the deaths for the year occurred within ten days after entering the hospital, and nearly one-third (89) were from consumption, and all of these but 10 were of colored patients.

Upon the recommendation of the Board of Managers of the National Soldiers' Homes, 5 ex-soldiers who were awaiting transportation were cared for. The hospital received from the Board \$25.20 as compensation.

The sanitary condition of the hospital has been good.

The building for the accommodation of cases with contagious diseases is nearly completed, and 2 additional nurses to attend this class of cases will be required.

The surgeon in charge recommends Congress should be asked to

make appropriations for the erection of new hospital buildings of brick. New ward buildings are badly needed, and provision should be made for the erection at least of a two and one-half story female ward. He requests that the purchase by the government of the present buildings and grounds be brought to the attention of Congress, and also the necessity for increase in the salaries of hospital employés. A number of the female nurses receive only \$10 per month, two \$11, and some of the male nurses \$12 and \$16.

The following paragraph from the report of Dr. Purvis, the surgeon in charge is quoted with pleasure:

The religious services have been conducted by the theological students of Howard University, by the Society of St. Vincent de Paul, a Catholic society, and by the members of the Protestant Episcopal Church. In addition, ministers from the city make frequent visits to the sick. Rev. Father William J. Hooman, of St. Augustine's, and Rev. Edward Marshall Mott, of Rock Creek Church, are regular in attendance. Mrs. Ada Spurgeon continues her missionary labors among the sick; the management feels in debt to her for the valuable services she has rendered.

GOVERNMENT HOSPITAL FOR INSANE.

This important institution is well conducted and is expanding rapidly to meet the yearly increased demands upon it. The superintendent's valuable report furnishes the following statements and suggestions for the treatment of those unfortunates requiring its care:

Summary of inmates.

	Males.	Females.	Total.
Remaining June 30, 1890.....	1,155	350	1,505
Admitted during the year ending June 30, 1891.....	271	81	352
Whole number under treatment.....	1,426	431	1,857
Discharged:			
Recovered.....	36	30	66
Improved.....	38	15	53
Unimproved.....	1	1	2
Died.....	98	30	128
Total discharged and died.....	173	76	249
Remaining June 30, 1891.....	1,253	355	1,608

The number of admissions, 352, exceeds that of any other year since the war.

There were 128 deaths, which is about $8\frac{1}{2}$ per cent of the average number resident, and less than 7 per cent on the whole number under treatment. This is a low mortality, in view particularly of the advanced age of so large a proportion of our inmates.

The number under treatment June 30, 1891, 1,608, is more than 100 in excess of the number remaining June 30, 1890, 1,505, which, in its turn, was more than 100 greater than the number remaining June 30, 1889, viz, 1,397. An annual gain of more than 100 insane persons may therefore be expected, and large additional accommodations must be

built to provide for this increase. This unexpectedly large accession is mainly due to the number who have been received from the different branches of the National Home for Disabled Volunteer Soldiers, no less than 113 of whom, with their added burden of years and infirmities, have come to us during the year.

Howard Hall and the addition completing it, now building, make satisfactory provision for the care and custody of the criminal and dangerous classes of the male patients. There are 120 single rooms designed as lodging rooms for its inmates; and, entirely distinct from the rest of the hospital, are dining room, work rooms, amusement room, smoking room. An outdoor court of more than a fourth of an acre, and frequented by the patients, is inclosed within the building's walls.

The Toner building is designed for the care of the acutely sick, feeble, and paralytic cases among the male patients. It has one hundred beds and insures absence of all unpleasant suggestions from the wards of the active and violent insane. There is here a resident physician, a day and night service of nurses, and a distinct kitchen where the special diet for the sick is prepared.

Atkins Hall has open doors and windows unbarred, and offers quarters for workmen among our inmates, who have made it a home. This building, one of the earliest instances of the distinct provision for a class here, has barely accommodation for fifty beds, while there are not less than two hundred more who would labor as contentedly as these under surroundings favoring their employment. The last Congress, by an appropriation of \$20,000 for the purchase of additional land for farming purposes, has in a measure assured a location for such persons.

With this, a tract containing between 400 and 500 acres of arable land has been secured for the hospital. It is a farm susceptible of varied culture, about 3 miles distant from the hospital. It is beautifully situated, lying on and overlooking the Potomac River, commanding views of both Alexandria and Washington, with long reaches of the river beyond.

Separate provision is this year asked for those whose insanity is associated with epilepsy.

The estimated value of the products of the land now cultivated is \$39,598.74.

ESTIMATES FOR THE FISCAL YEAR ENDING JUNE 30, 1893.

For current expenses.....	\$363,000
For general repairs and improvements.....	20,000
For additional accommodations, viz, distinct pavilions for 150 of the epileptic insane, including furnishing and heating.....	63,250
For special improvements, viz:	
Rebuilding machine shop	6,372
Electric plant for lighting and ventilating	22,500
Inclosing new farm and refitting buildings on same.....	7,360
For deficiency in support for the fiscal year ending June 30, 1892	22,000

The estimate is based on a probable average number of 1,650 at a per capita annual cost of \$220. Congress for many years has divided the appropriation between the sundry civil bill and the District bill. Following the ratio of former years based on the increase in numbers of the District patients during the past year the amount to be appropriated in the District bill will be \$94,700, leaving \$268,300 to be provided in the sundry civil bill. Of the latter amount it is desired that not exceeding \$1,500 may be used for defraying the expense of returning patients to their friends.

The cracks in the walls of the machine shop, built in 1856 and in constant use since, are steadily widening, and the building will now have to be condemned and taken down, whether rebuilt or not. It is imperatively necessary that the hospital shall have the almost daily use of saw, lathe, and planer, and the sum of \$6,375 is asked to rebuild the shop on an enlarged plan and a firm foundation.

To introduce an electric plant for lighting and ventilating the hospital, \$22,500. The gas plant was built many years ago, when the hospital area was less than one-half its present extent, and if this system of lighting is continued the works and mains, long since outgrown, will require to be wholly renewed at an expense not varying much from that necessary to provide a system of electric lighting.

The sum of \$7,360 is asked for necessary changes to put the new land in condition for working and occupation.

DEFICIENCY.

The estimate for current expenses for the year 1892, which under the law the superintendent was required to make on or before September 1, 1890, was based on an estimated average of 1,475 indigent persons under care and treatment, an estimate which time has shown was entirely too small, the increase in the number of inmates being unusual; for the past two years at the rate of more than 100 annually. On first day of the year for which the appropriation was made there were more than 100 inmates in excess of the estimated number, and the average number of indigent patients for the year can hardly fail to be considerably in excess of this. Coupled with this excess of numbers is the fact of a great advance in the price of all meats and flour, an advance by no means offset by the fall in the price of sugar. It accordingly becomes necessary to revise the estimate and assume an average of at least 1,575 indigent patients, giving a deficiency of \$22,000 in the appropriation for the current expenses of the hospital.

A Washington lady, with proper sanction, has generously caused to be erected for the insane on the grounds of the hospital a brick cottage handsomely ornamented. This she gives to the United States in order that her afflicted child may have a home there while she needs it, and that at last there may be, in the language of the law, "vacancies" at

St. Elizabeth, where afflicted residents of the District of Columbia having means may be suitably accommodated, without encroaching upon the rooms provided by the Government for those who by reason of indigence are unable to defray the expenses of their care.

The recommendations of the superintendent are approved.

ARCHITECT OF THE CAPITOL.

The Architect of the Capitol reports many improvements made on buildings and grounds during the fiscal year.

Among other things are the following:

New steam boilers for the Senate wing have been contracted for and the construction of their foundations and flues have been commenced.

Electric bells have been supplied to all committee and office rooms.

The electric lights have been extended to many additional rooms in the Capitol, so that now the capacity of the dynamos in use has been reached. Additional dynamos are required, not only to further extend the lighting, but as a reserve in case of accident to the present dynamos.

The electric plant is not the property of the United States, but is by law rented from the company owning it; and it is again recommended that Congress provide for the purchase of the electric lighting plants in the two wings of the Capitol when the Senate plant is changed to a low-tension system, as has been proposed by the Westinghouse Company.

Of the series of busts of those who have been Vice-Presidents of the United States, there have been received, in addition to those formerly named, those of Tompkins and Hendricks and that of Vice-President Morton.

The marble and granite work of the Capitol terraces has been completed and the office rooms of the same on the Senate side finished and are now occupied.

Eighteen bronze lamp-posts and 18 bronze vases have been received and put in place on the terraces.

The work of taking up and resurfacing the asphalt concrete pavement at the east front of the Capitol, authorized by the act of March 3, 1891, has been commenced and the main roadway is, under the terms of the contract, to be completed by the first day of August next.

The slope at the west of the House terrace has been graded and prepared for planting, and the grounds in general have been kept in good condition.

The work of fire-proofing and other repairs at the Smithsonian Institution building, as provided for in the act of August 30, 1890, was not begun last season, as the approval of the Regents, required by the act, could not be obtained until their meeting held January 28, 1891. This approval having been given, the iron work, slating, and plastering were let after public advertisement, and contracts entered into for these several branches of this work.

HOT SPRINGS RESERVATION.

The report of the superintendent for the year ending June 30, 1891, discusses thoroughly the condition and needs of the Hot Springs Reservation in Arkansas.

BATH HOUSES.

It appears that there are twelve persons or copartnerships conducting bath houses or claiming bath-house sites on this reservation, who have during the last fiscal year paid water rent in the aggregate upon 292 tubs, at an aggregate monthly rental of \$730, and eight persons or copartnerships conducting bath houses off the reservation who have paid water rent upon 151 tubs at a monthly aggregate rental of \$377.50. The aggregate receipts from water rents and ground rents amounted to \$19,682, and the expenditures for salaries, repairs, improvements, etc., were \$14,221.33, leaving a net income to the Government of \$5,460.67 from the Hot Springs Reservation. A special report from the Secretary of the Treasury shows a balance to the credit of the Hot Springs Reservation fund of \$18,571.53.

This fund is under the control of the Secretary of the Interior, to be expended for the protection and improvement of the Hot Springs, for the care of the permanent reservation, and for the maintenance of free baths for the invalid poor of the United States.

It is provided by act approved March 3, 1891, entitled "An act to regulate the granting of leases at Hot Springs, Ark., and other purposes" (26 U. S. Stats., p. 842), that the Secretary of the Interior may grant leases on this reservation for bath houses and bath-house sites for periods not exceeding twenty years, and to cause any surplus hot water to be furnished off the reservation to bath houses, hotels, and families. The act is aimed against the control of more than one bath house by any one person or combination of persons; to render the houses fireproof, and to give the Secretary entire control of the details by which these purposes are to be carried into effect.

Under this act the old combination of lessees and others has been broken up and new leases are just now being made for different periods according to the demands of justice in each case. All new buildings are to be on plans first approved at the Department, and it is intended that these shall be not only of fireproof material, but shall be furnished with bathing appliances first class in every particular. Two of the old and worn-out houses have been already removed by order of the Secretary, and their places will be supplied with substantial and ornamental buildings. As rapidly as the other houses fall into decay the same process will take place, no doubt.

The highway that formerly ran through the center of the park in front of the houses is erased and a pavement walk built along the public street instead. The old and rotten wooden "coolers" that here-

tofore disfigured the mountain side in the park have been removed, and the grounds cleared of all refuse matter. Walks and roads will be built on this portion of the reserve and on the other portions overlooking the city of Hot Springs, so that the 60,000 visitors seeking the benefits of these curative waters may enjoy the no less healthful woods and fields surrounding them. It is hoped that the care to which this reservation is entitled and which is now being exercised will soon make the reservation and bathing places worthy of the government. It can readily be made, under intelligent management, one of the most attractive resorts, not only in our country but in the world.

The city of Hot Springs is growing rapidly. There are some of the largest and best kept hotels there, and the visitors will soon be at least an hundred thousand a year. The opportunity is at hand for the United States to make a great advance in the improvement of this valuable estate.

TOWN LOTS.

The Commission laid out 2,019 city lots, of which 1,435 were awarded to individuals, 258 were sold and donated, and 326 are yet unsold, with title still remaining in the United States.

The act of March 3, 1891 (26 U. S. Stats., 844) provides also—

That the Secretary of the Interior may direct the public sale of all unsold Government lots on the Hot Springs Reservation, and not now permanently reserved at the city of Hot Springs, after having had the same reappraised, and also advertised as now required by law, and no lot shall be sold at less than the appraised price.

This appraisement is now being made and it is intended to have the lots and whetstone quarry sold early in the coming year. This is the purpose of the law, and it will be of great advantage to have these vacant lots occupied for homes and business houses and the quarry duly worked. The funds realized will be at command for the improvement of the parks and property in the particulars hereinbefore indicated.

PERMANENT RESERVATION.

The original reservation of 2,529.10 acres was subdivided by the Hot Springs Commissioners, appointed under the acts of Congress of March 3, 1877, and December 16, 1878, as follows:

	Acres.
Hot Springs Mountain	264.93
North Mountain	224.74
Sugar Loaf Mountain	129.02
West Mountain	281.94
Area of city lots	1,270.10
Area of streets and alleys	358.37
Total	2,529.10

The four mountains mentioned above, containing an area of 900.93 acres, constitute the "permanent reservation," which is "forever reserved from sale and dedicated to public use as parks," under the act of June 16, 1880, section 3.

PERMANENT IMPROVEMENTS.

The most important and extensive improvement is the stone culvert erected over Hot Springs Creek. Its total length, with its branches, is 3,500 feet, with a width of 17 feet and an average height at the crown of 10 feet. Two thousand feet of it extend beneath the streets of the town of Hot Springs, and as the act of June 16, 1880, ceded the "streets, courts, alleys, and other thoroughfares" to the corporation of Hot Springs, the question arises as to the jurisdiction over this portion of the culvert, and as to whose duty it is to keep the same in good condition and repair.

The Arlington Hotel is on the permanent reservation, and its proprietors are authorized to use an acre of ground for the site. The hotel appears to be satisfactorily kept.

THE FREE BATH HOUSE.

During the year the average number of free baths given daily, Sundays excepted, was about 600, or an aggregate of 187,200 for the year. The new bath house was accepted from the contractor on February 18, 1891, and on the 23d of the same month was opened to the public. The facilities and accommodations of this building are vastly superior to those heretofore afforded and give needed relief to many afflicted poor people. But the space for bathers has not been found, even under these improvements, to be sufficient, and an addition is about to be erected. The practice by the attendants of demanding fees for service and small supplies has been prohibited, and a sufficient increase in wages made to secure prompt and cheerful care of the poor without expense to them.

IMPOUNDING RESERVOIR AND PUMPING STATION.

An act of Congress approved October 2, 1888, appropriated \$31,000 "for providing a system of reservoirs, pumps, and piping and for other purposes necessary to the collection and economical distribution of the hot water."

Upon completion of the work the superintendent took possession of the improvements on June 9, 1891, under direction of the Department, but the pump has not been operated since it has been in his possession.

After the authorization of the work by the act of 1888, as cited, Congress passed a law, approved March 3, 1891, the sixth section of which provided "that the authority heretofore conferred upon the Secretary of the Interior to collect the hot water upon said reservation, shall be so construed as to require water to be collected only where such collection is necessary for its proper distribution, and not where by gravity the same can be properly utilized." This law has the effect of rendering the use of the plant unnecessary, unless it shall be applied to distribution off the reservation. All the bath houses on the reservation can be supplied by gravity.

MOUNTAIN PARKS.

Although more than ten years have elapsed since the mountain areas were dedicated to public use as parks, no appropriations have been made to improve them, and it is earnestly suggested that great benefits and blessings would accrue to invalids if these splendid park sites were improved and rendered accessible. A liberal appropriation by Congress for this purpose is recommended.

WATER AND DRINKING FOUNTAINS.

Fountains of both hot and cold water are in course of erection on the Bath-house Park and adjoining streets, and many other improvements have been made there to increase its beauty and usefulness.

ROADS AND WALKS.

The superintendent strongly recommends the construction of walks and roads on the mountain reservation; and it is the purpose of the Secretary to have these made at a moderate rate. There have been already made some paths, plank walks, and roads to reach the nearest park.

HEALTH RESORT.

The superintendent remarks that the Hot Springs of Arkansas continue to grow in favor in public estimation. Wonderful and many remarkable cures are being effected by the use of these waters. The number of invalids and visitors is constantly increasing, and the facilities for their accommodation are keeping pace with the demand therefor. There are now about 400 hotels and boarding houses, and 16 bath houses, with a total of 409 bath tubs in the city. The expense for boarding, physicians' fees and medicines, bathing and bath servants, per month, range from \$49 to \$210.

Quite an interesting paper is annexed to the report of the superintendent upon the length of time during which the curative properties of these waters have been known to mankind. He also treats of the geological history of the "tufa" formation, and gives the result of experiments and explorations recently conducted. He recommends, in conclusion, the appropriation of \$10,000 to be expended in scientific investigations as to the source, extent, and the possible future environments of these hot-water fountains.

YELLOWSTONE NATIONAL PARK.

Since the Secretary's last annual report, Capt. Boutelle has been relieved of the command of the troops in the park, and Capt. George S. Anderson, Sixth Cavalry, U. S. Army, by order of the Secretary of War has assumed command as acting superintendent, under the immediate control of the Secretary of the Interior.

GAME.

The superintendent reports that the large game in the park has continually increased. He says, in substance, that there is abundant evidence that many buffalo are contented and quiet in the Park, and that they are on the increase. A herd of about 30, with several small calves, has been seen near the Trout Creek lunch station and elsewhere. Two small bands of about 30 each, one with 12 or 15 calves, were found near the west line of the Park, in addition to several single ones and small bunches. It is no exaggeration to say there are 200, and probably there are 400, within the Park and that they are thriving. The elk have increased enormously, and most conservative estimates place their numbers at 25,000. Their continuance in the park is assured and their overflow into adjoining territory will furnish abundant sport for the hunter. Mountain sheep, deer, and antelope are tame, numerous, and on the increase. They are hunted but little, if at all. There are a few moose in the extreme southern part of the park.

Trapping of the fur-bearing animals is carried on across the park lines, but careful watching and one or two arrests have reduced it to a minimum.

CAPTURE OF ANIMALS.

The superintendent further states that animals are being captured under the direction of the Secretary for the National Zoölogical Gardens at Washington, D. C. The appointment as hunter was given to Mr. Elwood Hofer, the most competent man in the country; but owing to scarcity of funds with which to pay him he resigned his appointment after two months. He, however, continued to collect specimens. He has caught and turned over to the superintendent two black bear cubs, three young foxes, two elk, and a black-tailed deer. There were also two antelope, but one night not long since some carnivorous animal broke into their inclosure and killed and ate them. When the time for shipment comes it will be possible to readily trap and add to the collection a number of the smaller animals the wolverine, wolf, lynx, marten, badger, porcupine, beaver, etc.

Bears have become very troublesome at all the hotel slaughter-houses, and other places in the park where there is anything for them to eat. They have not proved at all dangerous, but it is impossible to keep provisions anywhere they can reach. The capture of one at the Fountain Hotel was authorized, but he died of a rupture of the heart in his struggles to escape. Another was caught in a trap there and he is now in the Washington gardens. Four small bears were caught, one of which broke his chain and escaped, and one was eaten by an old bear while he was chained in front of the house at Yancey's. As winter approaches it may be found necessary to kill one occasionally, especially if they become destructive of the game or herds. By another season it is hoped to supply specimens of all the animals native to the park;

their retention there during the season has proven very interesting to tourists.

FISH.

As appears by the letter of the Commissioner of the United States Commission of Fish and Fisheries to the Secretary, dated October 7, 1891, Prof. B. W. Evermann was sent to the park to ascertain the result of the effort to stock the streams and lakes with different species of trout, that has been carried on for several years past. The work of the Commission appears to have been very successful. Six different species of trout were planted in as many different streams and lakes, at least five of the six are doing well, and there is no reason to think that the sixth species is not also prospering.

LEGISLATION NEEDED.

It is to be much regretted that there is an entire absence of law to punish depredations there, as they affect the forests, the game, and the wonderful formations. The attention of Congress has often been called to the necessity of such a penal statute, and it is now again recommended as necessary. The measure known as the "Vest bill" has repeatedly passed the Senate, but in the House, while always favorably reported, it has unfortunately been accompanied by an amendment foreign to the bill, granting a right of way through the park to a railroad. This was the case in the last Congress, and, as on former occasions, those who had been instrumental in urging the bill thought it better that it should fail than pass with this provision.

The Secretary's opinion, as hitherto expressed, has been that a railroad would be detrimental to all the purposes for which the park was set apart. It is earnestly hoped that Congress will not give up to a private enterprise any part of what it has set apart for the education and enjoyment of the whole people. If once such railroad franchise is granted, it will result in the practical abandonment of that region as a forest and game reserve. Each year demonstrates the wisdom of Congress in setting apart this magnificent domain and the necessity of keeping it under government ownership, free from private or corporate intrusion. It embraces one of the largest forest-bearing districts in the Rocky Mountains, and contains the head waters of some of our greatest rivers. The importance of preserving such tracts as affecting the water supply of the country has already been discussed in this report.

ADJACENT FOREST RESERVE.

Under the act of March 3, 1891, the President is authorized to set apart any portions of the public lands bearing forests, and acting under this authority you have by proclamation already set apart and reserved from settlement a large tract of land lying to the south and east of the park, in the State of Wyoming. This tract is the same as that which Congress has been asked to add, and is included in the bounda-

ries as provided for in the "Vest bill," already referred to. Ample provision for including it for the purpose of jurisdiction is made by Congress in the act admitting Wyoming as a state. The reserve is densely wooded, contains great quantities of large game and some of the most remarkable scenery in America. To make it accessible to the public and capable of protection, it is recommended that an appropriation be requested for a road from the Upper Geyser Basin to the southern boundary. It is greatly needed.

There should certainly be no hesitation or difficulty on the part of Congress in providing means by which the regulations made by the Secretary of the Interior for the protection of the park may be made effectual. As it is now, the park is placed under the care of the Secretary and he is authorized to make rules and regulations for its government; but as no penalties are provided, there is no way in which such regulations when made can be properly enforced. No punishment can be inflicted for acts which should really be denounced as crimes; such, for instance, as the firing of the forests, the destruction of the game, and spoliation of the objects of interest within the park. All that now can be done is to turn the offender out of the park, and thus give him an opportunity of returning and renewing his malicious acts.

ROADS.

The roads already built have been kept in good repair, new ones located, and much efficient work performed thereon during the past season. The park is almost entirely within the state of Wyoming, but, as the superintendent states, it is absolutely inaccessible from that direction. He states that if a part of the government appropriation should be expended in making a road down to the Snake River, as far as Jackson Lake, a connection would soon be made with it from some point on the Union Pacific Railroad, and thus a new and desirable route be opened. He recommends an appropriation of at least \$100,000 for the construction and repair of roads, with the suggestion that it be made available as early in the year as possible, and he further remarks that the amount of money at the disposal of the superintendent is entirely inadequate, and requests an appropriation of \$10,000 to be expended in policing camps, clearing up fallen timber, renewing sign boards, etc.

These recommendations are reasonable, and your favorable consideration is asked for them.

HOTELS.

The hotels established under leases made by the present Secretary are reported to be well kept and are now furnishing abundant accommodations to visitors. These, with the good roads, make a visit to the park enjoyable, and will attract more and more visitors yearly to contemplate the wonderful exhibitions of nature there presented.

TRANSPORTATION.

The transportation in the park has been conducted, according to the superintendent's report, efficiently during the last season. Much complaint was made the season before, both in regard to the means of transportation and the treatment of passengers, and it was determined by the Secretary early in the spring that the privilege of transporting passengers in the park should be given to Mr. Huntley, of Helena, Mont., who is expected to enter upon the discharge of this business in time for the next season. There has been a small steamer placed upon the lake, the boat having been duly inspected and licensed to carry 125 passengers, under the United States Statutes.

There has been some poaching in the park, owing to the want of laws, as hereinbefore pointed out.

A meteorological record accompanies the superintendent's report.

YOSEMITE NATIONAL PARK.

Upon the establishment of this park under act of Congress and the instructions of this Department, on request of the Secretary, Capt. A. E. Wood, Fourth Cavalry, U. S. Army, was detailed by the War Department to act as Superintendent. He arrived at the park on May 17, 1891, and has very efficiently performed the duties assigned to him. It is peculiar and inexplicable that Congress imposes upon the Department of the Interior the custody and management of the several national parks, but makes no appropriation for the purpose, and even omits to enact any penalties for violation of the rules or regulations required to be formulated by the Secretary. It is much to be desired that the protection of the law be extended to these very important possessions.

The superintendent has made his report, and in it will be found a very interesting statement of the means used to protect the reservation from the encroachment of herders and other trespassers heretofore devastating it. The following is given by him as a description of the topography, the roads and trails leading into and over it:

The meridian and parallel of latitude through Mount Diablo are taken as the lines of reference, the latter of which passes through the Park. Of the 42 townships which constitute the Park, 12 of them lie north of this line, the remaining 30 south of it.

The general trend of the summit of the Sierra Nevada Mountains is from the northwest to the southeast. The highest point within the Park is Mount Lyell, 13,016 feet. Westward, and to a distance of from 15 to 20 miles from the summit, the country is rough, interspersed with bare peaks, intersected by deep and immense cañons, presenting to the eye a wild and savage appearance.

The principal water courses within the park are the Tuolumne, the Merced, and the South Fork of the Merced rivers, with their numerous tributaries. The cañon of the Tuolumne, beginning in township 1 north, range 23 east, is impassable for about thirty miles. The cañon of the Merced, beginning in township 2 south, range 22 east—the well-known Yosemite Valley—surpasses description. The cañon of the

South Fork of the Merced is deep, exceedingly rugged, but is passable at many points. The country between these streams is heavily wooded generally, and after getting out of the cañons has many features of the plateau and is passable. The tributaries of these streams have their sources well up toward the top of these plateaus, where the water percolates through the soil and gradually collects in comparatively level places, which are covered with luxuriant grass. These levels vary in extent from a few square feet to 100 acres, forming beautiful meadows set in the most magnificent forests in America.

The wagon roads which enter this Park are three in number. They are all toll roads, and are owned by incorporated companies.

The only road entering from the south is the best, and by far is of the greatest importance. Nearly all of the travel to the Yosemite Valley passes over this road. Stages pass over it every day during the season of travel, and it is kept in excellent repair. It leads from Raymond, a railroad station, to the Yosemite Valley, and traverses the Park for 26 miles. It is owned by the Yosemite Stage and Turnpike Company.

There are two roads which enter the Park from the west, the most southerly being the road from Coulterville to the Yosemite Valley. It is in very good repair and traverses about 25 miles of the Park. It is known as the Coulterville and Yosemite Turnpike, and is principally owned by Dr. J. T. McLean, of Alameda, Cal.

The remaining road enters the Park in township 1 south, range 19 east, and leads from Milton, a railroad station, to the Yosemite Valley. It is kept in fair repair. It is known as the Big Oak Flat road.

A road of great importance to the troops guarding this Park leaves the Big Oak Flat road about 5 miles after the latter enters the Park, and traverses the entire Park from west to east south of the Tuolumne River, finally crossing this river at Tuolumne Meadows, and leaving the Park near the southern line of township 1 north, 24 east. It was built eight or ten years ago, by a Boston mining company, to enable them to bring machinery to their mines in the vicinity of Tioga, and also to haul ore to the railroad. The mines have not been worked for the past two or three years, and the road has not been repaired during that time. A number of trees have fallen across it, and in places it is badly washed, but it makes a good mounted trail, and as such is of much importance. This is known as the Big Oak Flat and Tioga road. Recently I passed over this road from the crossing of the Tuolumne to its western terminus.

The most important trail through this Park is known as the Mono trail, and commences at Wawona, and after winding up the side of the cañon of the South Fork of the Merced takes a northeasterly course, crossing the Merced River just above the Nevada Falls; thence, after heading many tributaries of this latter river, drops over the divide between it and the Tuolumne, crossing the latter at Tuolumne Meadows, and taking an easterly course passes the summit through the Mono Pass or what is locally known as Bloody Cañon.

The Virginia trail comes down through townships 2 and 1 north, range 24 east, to the Tuolumne River at the lower end of the meadows. There is also a trail from Mount Conness to the Tuolumne Meadows.

The last trail worth noting enters the Park from the head waters of Bull Creek, and reaches the Merced River just about where the western boundary of the Park crosses it. It then passes up the river until it joins the Coulterville and Yosemite Valley road where the latter enters the foot of Yosemite Valley. There is a very indifferent road running from Mariposa to Hites Cove, which is situated in township 3 south, range 19 east. The road runs diagonally through township 4 south, 19 east, to the southwest. The grade is exceedingly heavy and difficult. It is of no importance to this Park.

There are several other trails of less importance that are being searched out and blazed to preserve them. They facilitate communica-

tion between different points, and their preservation is necessary to aid more rapid policing. Since the stock will not be permitted to graze there hereafter, they will soon become obliterated and lost, unless measures are immediately taken to preserve them. If once lost they can only be recovered again by infinite toil.

GAME.

The principal game in the Park consists of bear, deer, grouse, and quail. Neither variety is very plentiful. The sheep have been the curse of these mountains. As they graze in masses they trample the nests of the quail and grouse to pieces, destroy the eggs, or crush the young before they are able to fly. They separate the young deer from the mother and cause its death from lack of nourishment. As the autumn approaches the herds retire from the high mountains towards their winter grazing grounds, and the herders set fire to and burn over the forests in their rear so the rays of the sun in the spring can sooner penetrate to and melt the snows, thus giving an early and abundant crop of grass the next season. This is now prevented.

TIMBER.

Of the pines there are about nine varieties, and they grow at all elevations from 2,500 to 11,000 feet above sea level, the tamarack growing at the highest altitude of any. The cedar grows to great dimensions at from 4,000 to 7,000 feet. Two varieties of spruce grow at from 5,500 to 8,000 altitude. Three varieties of the fir grow at altitudes from 7,000 to 9,000 feet. At an altitude of about 8,000 feet a few specimens of the juniper have been seen. The black and live oak grow in the valley only, at 4,000 feet. There are a few cottonwood and Balm of Gilead at 4,000 feet. At about 5,000 to 6,000 feet are found a few dwarfed quaking aspen.

The most wonderful natural growth upon this earth, the captain remarks, is the *Sequoia gigantea*, of which there are two small groves within this Park. They are indigenous there at elevations between 5,500 and 7,000 feet.

The Superintendent recommends that Congress be requested to pass a law making it a misdemeanor to violate the rules for the Park, with the maximum fine fixed at \$1,000, and the maximum imprisonment fixed at six months, or both, at the discretion of the court.

Capt. Wood makes in his report a recommendation for diminished boundaries of the Park; but it is deemed not best to follow this; although it is presented by him upon very good reasons. It is believed that it will be sufficient to relieve a great majority of those having claims within the present boundaries, if townships 3 and 4, range 19 east, and west half of townships 3 and 4, range 20 east are excluded. This is recommended.

YOSEMITE VALLEY.

Under a resolution of the Senate, during the last year, an examination was made by the Department as to the management of the Yosemite Valley, now under the control of the State of California. This resolution directed that careful inquiry and report should be made whether the lands granted to the State of California, on certain conditions, by an act of Congress approved June 3, 1864, had been spoliated or otherwise diverted from the public use contemplated by the grant.

This grant included the gorge of the Yosemite Valley, at the head waters of the Merced River, of an estimated length of 15 miles and a width of 1 mile back from the main edge of the precipice on each side of the valley, and also the tract embracing what is known as the Mariposa Big Tree Grove.

The grant was made with the stipulations that "the State shall accept this grant upon the express conditions that the premises shall be held for public use, resort, and recreation; shall be inalienable for all time; but leases not exceeding ten years may be granted for portions of said premises, all incomes derived from leases or privileges to be expended in the preservation and improvement of the property on the roads leading thereto." These trusts, with the accompanying provisions and conditions, were accepted by California through an act of the legislature April 2, 1866. The lands have ever since been held and managed by the State of California through a board of commissioners.

There was no appropriation made by means of which the departmental examination could be thoroughly conducted, and reliance had to be placed entirely upon private statements obtained by correspondence. A report, however, was made, and transmitted to the Senate January 30, 1891.

In this it was said in substance that reports and statements, obtained from persons of good repute, and whose opportunities for having correct information make their testimony reliable, seem to establish, as to the Yosemite Valley, that there has been a very great destruction of timber there; some of which has been used for buildings, fences, and fuel; some removed simply to clear the lands for cultivation, and a great deal laid waste through carelessness and wantonness; that more than half of the valley has been fenced with *barbed-wire* fencing and cultivated with grass and grain; that these inclosures have confined travel to narrow limits between the fences and the slope of the mountains, and have left but little room for paths for pedestrians up this valley; that a great many rare plants which were new to botany have been destroyed, if not exterminated, by plowing and pasturing the valley; that the management has fallen into the hands of a monopoly, and no competition seems to be permitted in hotel accommodations, transportation facilities, nor in furnishing provender for the animals of tourists; the main road up the middle of the valley has been closed; and that the uninclosed portion of the valley is pastured

by the stock of the stable and transportation men, almost to the exclusion of the animals of the tourists or visitors; that these acts of spoliation and trespass have been permitted for a number of years, and seem to have become a part of the settled policy of the management.

The reports of the commissioners of California from 1885 to 1888 recommend the cultivation and seeding of 1,000 acres of the floor of the valley with grass and hay, and the seeding of the "valley from wall to wall with useful grasses" for the "augmentation of the revenue of the State." There are 1,141.56 acres on the floor of the valley, and it is estimated that from 600 to 800 acres have already been fenced and put to grass and grain.

Had it not been intended to preserve this beautiful valley in its primitive beauty, then it should have been given for homesteads. When the State of California accepted the grant the Yosemite was already famous for its most wonderful natural scenery. The purpose of Congress undoubtedly was to place it under the guardianship of the State as the best means to secure the perpetuation of its natural beauty and attractiveness. The authority conferred by the grant to lease certain portions for terms not exceeding ten years, and to apply the proceeds to beneficial improvements, was evidently intended to apply only to such portions as should be necessary for appropriate buildings for the entertainment of tourists and visitors, without marring the natural features of the valley. It was not contemplated that the valley should be turned into a farm or stock ranch. The rents were to be merely an incident to the main purpose of preserving the Park. If this be the true construction, the statute has been misinterpreted by the management. By resolution of the Senate this inquiry was to be continued, but still no appropriations being made and correspondence having been exhausted upon the subject but little has been added to the facts heretofore obtained.

The matters presented are of such great importance that they call for further examination than can be made without an appropriation, and it is recommended that a committee, with adequate means and power, be authorized to make further investigation and report.

With the report were sent many photographs and copies of the original letters.

SEQUOIA NATIONAL PARK.

Upon the establishment of this park, reported in the Secretary's last annual report, Capt. J. H. Dorst, Fourth Cavalry, U. S. Army, was detailed for duty as acting superintendent under instructions of the Secretary of the Interior.

He entered upon the discharge of his duties early in May. He has guarded the reservation from trespassers, and put it in a condition to preserve the wonderful trees that are there growing, the *Sequoia gigantea*.

The superintendent reports that the Giant Forest (the name given to the sequoia groves) covers four or five sections in the southwest corner of township 15 south, range 30 east, and northwest corner of township 16, range 30 east. It is in its natural state except for a few cabins and some fenced ground. One tree is $34\frac{1}{2}$ feet in diameter and 370 feet high. In other groves the sequoia trees form a very small proportion, being scattered here and there among spruce, fir, and pine trees. In the Giant Forest they are greatly in the majority and grow more thickly and to a greater size than anywhere else in the State. It is reported as the most remarkable forest of its kind in the world.

The country northwest of the Giant Forest is quite low, comparatively, and consequently free from snow early in the season. Near the sawmill in the park a detachment of troops, under the command of the superintendent, was stationed to protect the trees and patrol the northern portion as well as the General Grant National Park. There are other detachments located so as to protect the entire boundary. All sheep have been excluded and every precaution taken to restore the park to its original condition and make it a pleasant and profitable resort for persons seeking a summer vacation or desiring to learn more of the wonders there to be found.

The Mineral King district within the park seems to be the most favored resort for camping, hunting, and fishing parties during the summer months. For about six weeks over 300 people were camped within a mile of the command there. The Atwell estate, on which the mill mentioned is located, has been rented by Mr. Irwin Bernard, a member of the Kaweah colony, who is cutting timber on it, and employs members of the colony only. There are also within the park a few persons located, viz, James W. Griffin, formerly member of the colony, who lives on section 7; Mrs. Maria W. Eyrie on section 8, and Mr. Jacob Trouger on section 20. They are all farming, and claim their possessions as homesteads.

GAME.

The valuable game in the park consists of deer, bear, mountain grouse, and California quail. The streams in the Hockett meadows have been stocked with trout, and these fish are also found in the Marble Fork near its mouth and a few miles below it in the middle fork. The streams are too swift and the falls too high for fish to ascend them any distance into the park. Owing to the high altitude of most of the land and deep snows in winter deer can live in only a few places in the park in that season, and are forced into the foothills to the west. In the summer they go eastward, so also as to grouse and quail. The State law does not seem to give sufficient protection, and when this law expires there will be none unless Congress enacts penalties for violations of the rules and regulations now established. The park should be duly surveyed and the boundaries clearly marked.

For the better protection of the game it is recommended by the superintendent that townships 15, 16, and 17 south, range 31 east, be added to the park. The mountain range in which the east and middle forks head would then inclose the park on that side and form a barrier that would to a great extent protect it and materially lighten the labor of those guarding the park on the east side. It would also render disputes less frequent and reduce the danger of destruction by fire of many valuable trees. It is thought also that it would be well to extend the park westward so as to take in all the lands east of the north and south forks. This would be a further protection to the game and would prevent it becoming troublesome to settlers in the winter.

The Superintendent concludes his report with the statement that the prosperity of the population living in the valley between the Sierra Nevadas and Coast Range depends upon the preservation of the timber and brushwood in the mountains; that the brushwood covers the lower slopes and foothills to an altitude of about 5,500 feet, where the timber commences, and extends to between 10,000 and 11,000 feet wherever there is enough soil to support the trees. The brush and timber both assist in holding back the snow and prevent disastrous snow slides. They also keep the snow from melting too fast in the spring, and thus prevent dangerous floods and keep up a steady water supply till late in the season. He states that sheep destroy much of this brush, and the herders often set fire to it in the fall to destroy it, as the ground will furnish a good crop of grass next season. The only protection must be through the interference of the National Government or that of the State.

KINGS RIVER CAÑON.

Your attention is also requested to the paper contributed by Mr. John Muir to the number of the *Century Illustrated Monthly Magazine* for November, 1891, entitled "A rival of the Yosemite—the cañon of the South Fork of Kings River, California." It furnishes maps of this section and is illustrated by most admirable engravings of the wonderful scenery there existing. The engravings are chiefly from the pencil of Mr. Charles D. Robinson. These gentlemen as well as the editors of the *Century*, especially Mr. Johnson, have taken a great personal interest in the forest reserves in California, and are worthy of great consideration, both from their experience and intelligence. The magazine article mentioned advocates the extension of the Sequoia National Park so as to embrace the Kings River region and the Kaweah and Tule Sequoia groves. The boundaries are there set forth.

The subject is recommended to your favorable consideration and action.

The labor of protecting this valuable reservation has been willingly performed with earnestness and efficiency by the officers and soldiers sent there at the request of this Department, and it is gratifying here to acknowledge, with thanks, in this and all the other labors of this

Department requiring it the hearty and courteous coöperation of the War Department and the officers and soldiers of the army.

The superintendent states that some provision should be made for shelter for the troops while in the park. They should have good quarters, and an appropriation is recommended to meet this demand in this as well as in the other national parks.

KAWEAH COLONISTS.

There having been a serious complaint made by certain persons styling themselves the "Kaweah Colonists," and who claimed that they had been oppressively dealt with, a special report was received from Capt. Dorst as to what action had been taken toward them during his superintendency. It is not deemed necessary to here set forth this report, nor the history of the Kaweah Colony, nor its relations to the Department. Suffice it to say it was found necessary, upon the reservation of this park, to decide against the claims of these colonists, on the ground that they had made applications for merely cash purchases of the lands, and the final proofs had not been completed before the act of Congress was approved. The case was not free from some hardship. But the law in relation to it had been long and clearly established, and the decision could not be avoided. If relief is sought from Congress by request for a reasonable compensation for actual improvements, it should, in my judgment, be granted. But from all the facts in the case there does not seem to have been any such interference with the colonists at Atwell's mill, where they began the manufacture of lumber from sequoia and other trees on a tract of patented land, as justifies the great complaint made. There was no force used; and as soon as the land, on which they were, was found to be patented, the guard, by direction of the Department, was confined to the vacant sections and townships in the park.

THE GENERAL GRANT NATIONAL PARK.

This park has been under the same supervision as the Sequoia National Park, and nothing additional is to be stated in regard thereto. It is unprotected by law, but such protection as could be given by the presence of the acting superintendent and a handful of cavalry it has received. It is in good condition and improving in its natural features.

THE CASA GRANDE RUINS.

It appears from the report of the custodian that the repairs on Casa Grande ruins are nearly completed, so far as available under the appropriation of \$2,000. There have been unearthed several specimens that in the opinion of the custodian are of great value.

If it is intended to preserve this ruin, for which Congress has already appropriated a considerable sum, there should be at least forty acres reserved and inclosed around and about the building, and an appropriation made based upon surveys and estimates to cover the building and keep it from further decay; also to continue the excavations in the adjacent ruins for the purpose of eliciting more knowledge as to their original builders. There should also be provision made to pay for the services of the custodian.

MARITIME CANAL COMPANY OF NICARAGUA.

The annual report of the company shows that the regular annual meeting was held in New York City, May 7, 1891, and Henry E. Howland, Frederick Billings, Alfred B. Darling, Charles C. Glover, Franklin Fairbanks, C. Ridgely Goodwin, and Alexander T. Mason were elected directors to fill vacancies occurring by reason of death or expiration of term of office. Hon. James B. Eustis has since been elected a director to fill the vacancy caused by the death of Hon. Joseph E. McDonald. The following officials were elected for the ensuing year: President, Hiram Hitchcock; vice-president, Charles P. Daly; secretary and treasurer, Thomas B. Atkins.

The report states that during the past year much progress has been made in the actual work of construction. Many of the accessory works have been extended, and in some cases carried to completion. The railroad from the Atlantic port to the divide has been completed, equipped, and is now in operation for a distance of 11 miles with good culverts, and road-bed and track in first-class condition. The machine shops have been enlarged and are well provided for all work incidental to the construction of the canal. The jetty or breakwater, which is to protect the harbor entrance on the Atlantic coast from the effects of shifting sand, has been extended 1,000 feet or more into the ocean, and a second breakwater against northerly storms, has been commenced on the west side of the harbor. About 3,000 feet of actual excavation along the canal has been made and a channel formed from 150 to 230 feet wide and about 17 feet deep. Important work has been done on the Machuca Rapids and in the bed of the San Juan River, at that point. Eight miles of the route of the canal on the west side of the lake have been cleared of timber and undergrowth and the line for a railroad from the lake to the Pacific has been surveyed and located.

The health of the employes of the company is reported to have been good and the sanitary condition of the camps maintained.

In March, 1891, the president of the Nicaragua Canal Construction Company, Hon. Warner Miller, made a complete examination of the entire line of the canal and the numerous accessory works, and the official reports show that the work already done has been within the estimate of engineers and with all possible care, thoroughness, and

dispatch. The interests of the company are represented both in Nicaragua and Costa Rica.

Since the organization of the company 10,145 shares of the capital stock have been subscribed for at par, amounting to \$1,014,500, of which amount \$1,001,450 has been paid in cash into the treasury of the company. Receipts from other sources have amounted to \$27,216.12, making the total amount of cash received \$1,028,666.12. The other assets of the company consist of its capital stock; of the concessions, privileges, plant, lands, buildings, steamboats, locomotives, shops, supplies, etc., belonging to it, including the lands purchased from the government of Nicaragua for the route of the canal, at the cost of \$50,000, in accordance with the provisions of the Nicaraguan concession.

Since its organization the company has expended and issued for property, labor, and materials and administration expenses, \$803,340.21 in cash, and 27,780 shares of the full-paid capital stock, of the par value of \$2,778,000, and it is obligated for \$5,953,000 of its first-mortgage bonds.

It has also issued 180,000 shares of stock of the par value of \$18,000,000 in payment for concessionary rights, privileges, franchises, and other property. The liabilities consist of the amounts still due under concessions granted, of the \$5,953,000 of bonds above mentioned, which are due to the Nicaragua Canal Construction Company for materials and for work and labor in constructing the canal, and of cash liabilities not to exceed \$30,000 still outstanding and unpaid. A detailed description of the canal and work accomplished is annexed to the report of the company.

It seems appropriate that this great highway for the products and manufactures from and imports to the United States should be connected with the Department of the Interior. It is being built at the same time that the great waste places of the country are being opened to settlement, the factories increasing, the railroads extending, and the population rapidly multiplying. Soon our commerce must reach not only the states of South America and Mexico, but China and the East by this western route. It is gratifying to note that this short passage to some of the greatest commercial markets of the world will be ready by the time a demand for it becomes imperative.

JOHN W. NOBLE,

Secretary.

To the PRESIDENT.

PAPERS

ACCOMPANYING

REPORT OF SECRETARY OF THE INTERIOR.

EXTRACTS FROM REPORT OF THE COMMISSIONER OF THE GENERAL LAND OFFICE.

DEPARTMENT OF THE INTERIOR,
GENERAL LAND OFFICE,
Washington, D. C., September 23, 1891.

SIR: I have the honor to submit the following as the annual report of the business transacted by the General Land Office during the fiscal year ending the 30th of June, 1891, under the laws for the survey and sale of the public lands of the United States, or for otherwise disposing thereof, and the laws relating to private claims of land and the issuing of patents for grants of land under the authority of the government.

My immediate predecessor, Hon. Lewis A. Groff, resigned his position March 20, 1891. I entered on duty, as Commissioner, March 31, 1891. Therefore, the transactions of which report is made in the following pages took place in the fiscal year, about nine months of which transpired during the administration of my immediate predecessor and about three months during my own administration.

The administrative policy concerning the public lands, inaugurated under your direction shortly after March 4, 1889, has been continued throughout the fiscal year just closed, and it is most gratifying to report that this liberal and enlightened policy was favored by Congressional approval during the year.

It will be remembered that in 1885, and for several succeeding years, the Commissioner in charge of this Bureau conducted his administration upon the assumption that a very large proportion of the settlers on the public domain were dishonest and disposed to evade the law and defraud the government. In the presence of this violent assumption each settler was placed at the disadvantage of being presumed guilty of evil intent until he made the contrary appear.

On page 71 of his report for the fiscal year ending June 30, 1885, in discussing the subject of commuted homesteads, the Commissioner says:

The proportion of fraudulent entries of this kind can be more nearly estimated at the whole number of such entries than in any other manner.

And of homestead cases he says:

The average proportion of fraudulent entries made for five years' settlement is estimated at about 40 per cent.

All preëmption entries were pronounced bad, and of timber-culture entries he sets down 90 per cent. as fraudulent. To sum up, however, it is but necessary to quote from page 48 of his report the sweeping conclusion of Commissioner Sparks, which reads as follows:

At the outset of my administration I was confronted with overwhelming evidences that the public domain was being made a prey of unscrupulous speculation and the worst forms of land monopoly through systematic fraud carried on and consummated under the public land laws.

Entertaining such views it was but natural that the Commissioner should in every possible way impede the transaction of business in the Bureau. Such was the policy pursued. On April 3, 1885, an order was issued suspending action on all entries (except on certain scrip locations and on private cash entries) in the whole of Colorado, except the Ute reservation, and in all of Dakota, Idaho, Utah, Washington, New Mexico, Montana, Wyoming, and portions of Kansas, Nebraska, and Minnesota. While this order was modified at a later date the spirit which prompted it controlled the administration of the land laws for many years. The great body of honest settlers were erroneously tainted with suspicion, created by the acts of a very small percentage of evil-disposed persons.

On vague and indefinite charges large numbers of public land entries were suspended pending investigations conducted at the expense of the government to discover supposed frauds. Suspected settlers were required to travel to local land offices in every public land State and Territory, to furnish proof of the good faith on their part which the law presumes in every man's favor until the want of it is in some way affirmatively shown.

The energies of the working force of the Bureau were diverted from customary duty and employed in an apparent effort to discover how to avoid transacting public business. In consequence of this policy thousands of well-meaning settlers were burdened with heavy expense they were ill able to bear, and all business in the public land States, and in the Territories, was very injuriously affected. Titles became unsettled, and the pioneer, engaged in clearing the way for advancing civilization, for the first time in a quarter of a century, was made to feel that the power of the government was arrayed against him. Efforts made to establish the wholesale charges preferred against settlers practically failed, as the records of the Bureau show. Nevertheless, land patents were very slowly and reluctantly issued between the close of the fiscal years ending June 30, 1885, and June 30, 1889.

About the last-named date the effects of a change of policy became obvious. Under the changed order of business, and legal constructions, settlers were presumed to be honest and well disposed toward the government and its laws.

This policy has controlled the administration of the General Land Office for the last two fiscal years, and as a contrast of the substantial results evolved in the way of actual business transacted under the respective lines of administrative policy may be of value, I submit the following:

Comparative statement of agricultural and other patents issued by the General Land Office during the fiscal years ending June 30, 1886 and 1887, and the fiscal years ending June 30, 1890 and 1891.

Patents—	Issued during fiscal year ending—		Total.	Issued during fiscal year ending—		Total.
	June 30, 1886.	June 30, 1887.		June 30, 1890.	June 30, 1891.	
Agricultural:	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
Preemption.....	7,782	18,060	26,442	77,346	72,129	149,515
Homestead.....	11,096	5,444	16,540	36,928	38,617	75,545
Timber culture.....	321	354	675	2,206	3,080	5,346
Military bounty land warrants.....	290	60	346	306	327	723
Agricultural college scrip.....	5	13	18	20	12	32
Supreme Court scrip.....	86	13	99	87	20	107
Sioux half-breed.....	1	4	5	13	2	15
Choctaw scrip.....	1		1			
Surveyor-general's scrip.....	4	3	7	115	98	213
Dodge scrip.....	6	3	9		6	6
Porterfield scrip.....	1	3	4		2	2
Arredonda scrip.....	289		289		1	1
Coles scrip.....	3		3			
Valentine scrip.....		1	1	6	14	20
Wilson warrants.....		2	2			
Red Lake and Pembina half-breed.....		2	2		3	3
Special act of Congress.....					9	9
Miscellaneous.....				70		70
Total.....	19,885	24,558	44,443	117,247	114,300	231,607
Mineral.....	675	1,489	2,232	1,407	1,792	3,196
Coal.....	15	63	68	224	226	450

RECAPITULATION.

Patents issued.	During fiscal years ending June 30—		Increase.
	1886 and 1887.	1890 and 1891.	
Agricultural:	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
Preemption.....	26,442	149,515	123,073
Homestead.....	16,540	75,545	59,065
Timber culture.....	675	5,346	4,671
Military bounty land.....	346	723	377
Agricultural college scrip.....	18	32	14
Miscellaneous scrip.....	422	446	24
Mineral.....	44,443	231,607	187,164
Coal.....	2,232	3,199	967
	68	450	382

The sympathy of Congress with the expeditious disposal of public-land business was made manifest in the seventh section of an act approved March 3, 1891, entitled "An act to repeal the timber-culture law, and for other purposes."

Under and by virtue of the provisions of said section cases long suspended on suspicion of fraud, or under harsh technical rules, are passed to patent in a manner which, while greatly facilitating the transaction of business, still leaves ample safeguards against the perpetration of possible fraud.

The fiscal year upon which we are entering will be fruitful of results through the strength given the policy of the administration by this new legislation. Indeed, I feel justified in predicting that, with the present office force, the business of the Bureau will be practically brought up abreast with current work by the end of the next fiscal year. The work performed and the results accomplished during the

fiscal year included herein sustain the prediction made, and may be briefly summed up as follows:

DISPOSALS OF PUBLIC LANDS.

The following is a statement of the acreage of public lands disposed of during the fiscal year ending June 30, 1891:

CASH SALES.

	Acres.
Private entries.....	30,955.50
Public auction, sales at.....	304.99
Preemption entries.....	1,391,413.31
Timber and stone-land entries.....	259,913.55
Mineral-land entries.....	33,691.35
Desert-land entries.....	400,432.49
Excesses on homestead and other entries.....	12,438.35
Coal-land entries.....	8,067.33
Lassen County desert-land entries.....	719.89
Townsite entries.....	1,741.85
Abandoned military reservations.....	669.81
University lands.....	40.00
Supplemental payments.....	2,479.63
Competitive bids.....	21.10
Under act July 23, 1866.....	154.88
Under act March 3, 1877.....	46.75
Total.....	2,143,090.78

MISCELLANEOUS.

Homestead entries (original).....	5,040,393.72
Timber-culture entries (original).....	969,006.38
Entries with—	
Military bounty land warrants.....	21,686.84
Agricultural college scrip.....	640.00
Private land scrip.....	4,539.17
Valentine scrip.....	240.00
Arredonda scrip.....	3,448.62
Sioux half-breed scrip.....	1,035.95
Chippewa half-breed scrip.....	160.00
Israel Dodge scrip.....	80.00
Supreme Court scrip.....	40.00
Surveyors-general scrip.....	40.00
Railroad selections.....	1,857,572.69
State selections, school, swamp, etc.....	174,404.81
Indian allotments.....	117,485.99
Donation claims.....	159.76
Original swamp selections.....	23,167.00
Act June 22, 1861.....	40.00
Total area of public land entries and selections.....	8,214,140.93

INDIAN LANDS.

Cherokee school lands.....	2,869.61
Ute Indian lands.....	67,894.04
Sioux Indian lands.....	1,859.83
Osage trust and diminished reserve.....	6,565.27
Kansas trust and diminished reserve.....	881.92
New York Indian lands.....	6,545.26
Miami Indian lands.....	40.00
Absentee Shawnee Indian lands.....	440.00
Omaha Indian lands.....	120.00
Umatilla Indian lands.....	33,252.68
Total Indian lands.....	120,468.61

RECAPITULATION.

	Acres.
Area sold for cash.....	2, 143, 090. 78
Miscellaneous entries	8, 214, 140. 93
Indian lands.....	120, 468. 61
Making a grand total of.....	10, 477, 700. 32

The foregoing does not include the following entries, the areas of which have been previously reported in the "original entries" of the respective classes:

Commuted homesteads (sec. 2301, R. S.)	546, 302. 34
Commuted homesteads (act June 15, 1880).....	2, 927. 67
Commuted timber-culture entries (act March 3, 1891)	67, 889. 26
Final homestead entries.....	3, 954, 587. 77
Final timber-culture entries.....	592, 385. 56
Final desert-land entries	198, 270. 81
Total area previously reported	5, 362, 363. 41

ISSUE OF PATENTS FOR LANDS DISPOSED OF.

AGRICULTURAL PATENTS ISSUED.

The class of patents embraced under this subhead includes all patents issued on final and commuted homestead entries; on preëmption, timber-culture, desert, private cash, townsite, and other entries embracing land of an agricultural, nonmineral character. The number of such agricultural patents issued during the fiscal year ending June 30, 1891, was 114,360, which, allowing 160 acres to each patent, would embrace an aggregate of 18,297,600 acres.

MINERAL PATENTS.

Of mineral and mill-site patents 1,792 were issued, as against 1,407 during the previous fiscal year, an increase of 385 patents. Of coal patents, 226 were issued, as against 224 patents during the previous year, an increase of 2, and including an area of 31,728.65 acres, as against an area during the previous year of 33,473.72 acres, or a decrease in area of 1,745.07 acres.

In the following exhibit are shown the States and Territories in which mineral and mill-site and coal land patents were issued:

States and Territories.	Coal land.		Mineral and mill-site.
	No.	Acres.	
Alaska.....			6
Arizona.....			36
California.....	3	480. 00	233
Colorado.....	103	13, 885. 65	952
Idaho.....			62
Montana.....	21	3, 497. 36	142
Nevada.....			85
New Mexico.....	7	849. 85	70
Oregon.....			23
South Dakota.....			49
Utah.....	16	2, 393. 81	124
Washington.....	29	3, 063. 89	
Wyoming.....	47	6, 658. 09	10
Total.....	226	31, 728. 65	1, 792

RAILROAD LANDS PATENTED.

There were patented for the benefit of railroad companies under Congressional grants during the fiscal year ending June 30, 1891, 3,088, 679.23 acres, as shown in the following table:

Union Pacific Railway Co.:		Acres.
Nebraska	1,290,275.82	
Kansas	950,042.73	
Colorado	10,441.40	
	2,250,760.95	
Little Rock and Memphis Railroad Co., Arkansas	32,272.24	
Chicago, St. Paul, Minnesota and Omaha Railway Co., Wisconsin	65,465.09	
Chicago, Milwaukee and St. Paul Railway Co., Iowa	240.00	
New Orleans Pacific Railway Co., Louisiana	156,365.66	
Northern Pacific Railroad Co.:		Acres.
Minnesota	261,773.01	
North Dakota	302,094.99	
	563,868.00	
Wisconsin Central Railroad Co., Wisconsin	5,418.51	
Southern Pacific Railroad Co., California	6,598.95	
Atlantic and Pacific Railroad Co., Missouri and Arkansas	7,529.83	
Missouri, Kansas and Texas Railroad Co., Kansas	160.00	
Total	3,088,679.23	

As against an area patented to railroads during the last fiscal year of 363,862.15 acres, or an increase of 2,724,817.08 acres.

SWAMP-LAND PATENTS.

The following statement shows the acreage by States of swamp lands patented during the year, also the acreage selected by the States and approved by this office, and the aggregate area of such lands patented to the States since the date of the grant:

Swamp lands patented, also selected and approved, during fiscal year ending June 30, 1891.

States.	Selected.	Approved.	Patented.	Total patented since date of grant.
	Acres.	Acres.	Acres.	Acres.
Alabama				411,189.26
Arkansas	1,102.63	17,886.24	18,108.95	7,603,818.31
California		8,179.58	62,682.06	1,522,142.31
Florida	4,873.79	191,308.00	187,270.84	19,301,096.88
Illinois				1,455,641.45
Indiana				1,257,863.05
Iowa		120.00	360.00	1,184,286.33
Louisiana:				
Act 1849		1,159.11	1,159.11	8,709,747.64
Act 1850			16,796.27	244,016.76
Michigan		612.50	919.37	5,608,234.01
Minnesota	6,003.80		51,222.69	2,941,815.70
Mississippi				3,259,153.20
Missouri			6,544.79	3,422,076.06
Ohio				25,640.71
Oregon	8,598.63	53,137.70	58,135.62	199,118.42
Wisconsin	2,588.25		14,927.05	3,347,828.16
Total	23,107.00	272,404.30	408,127.55	87,617,451.95

During the fiscal year ending June 30, 1890, an area of 109,351.89 acres was patented to the several States under the swamp land grants, but during the fiscal year ending June 30, 1891, an area of 408,127.55 acres was patented to the States, showing an increase of 298,775.66 acres in the last fiscal year over the fiscal year last preceding.

STATE SELECTIONS APPROVED FOR EDUCATIONAL AND OTHER PURPOSES.

The approvals during the year under the different grants to the several States for educational purposes and under the saline grant, having the effect of a patent, embraced an area of 756,172.91 acres.

The following exhibit gives the detail by States:

State.	Grant.	Approved during fiscal year ending June 30, 1891.
		<i>Acres.</i>
Alabama	School indemnity *	1,634.28
Colorado	do†	37,438.75
Idaho	University	40,000.88
Louisiana	School indemnity *	10,445.04
Minnesota	do†	30,181.23
Mississippi	do *	30,829.16
Nebraska	Saline	160.00
Nevada	School indemnity ‡	\$448,864.01
Oregon	do†	91,343.53
South Dakota	University	44,382.49
Washington	do	20,887.44
Total		756,172.91

* Alabama, Louisiana, and Mississippi have each a grant for schools of the sixteenth section in each township with indemnity following the grant. There has been no occasion to compute the exact aggregate of the lands granted in place and the indemnity selections, but it may be roughly estimated at one-thirty-sixth part of the area of these States.

† Colorado, Minnesota, and Oregon have each a grant of the sixteenth and thirty-sixth sections for schools with indemnity following the grant. There has been no occasion to compute the aggregate of the lands granted in place and the indemnity selections, but it may be roughly estimated at one-eighth of the area of these States.

‡ Nevada has a grant of quantity in lieu of the sixteenth and thirty-sixth sections restored to the public domain under the act of June 16, 1880.

§ The total of approvals of school selections in Nevada includes 9,228.36 acres indemnity selected under the original grant, and not under the grant of 2,000,000 acres made by the act of June 16, 1880.

The above-stated acreage of 756,172.91 acres, as against an area during the previous fiscal year of 539,779.84 acres, shows an increase of 216,393.07 acres. The increase in the fiscal year ended June 30, 1890, was over 300 per centum; the increase the last year over the previous fiscal year was over 40 per centum. This branch of the work will increase to a great extent on account of the admission of six new States, and the provisions of the act of February 28, 1891, amendatory of sections 2275 and 2276, Revised Statutes, by which the right of the Territories to select school land indemnity is placed beyond doubt.

INDIAN AND MISCELLANEOUS PATENTS.

The exhibit following shows the area of the land patented, and the States and Territories where located, during the year, on private land claims, donations, and Indian allotments, or selections in severalty, and scrip locations finally approved.

Indian and miscellaneous patents issued during year ending June 30, 1891.

	<i>Acres.</i>		<i>Acres.</i>
South Dakota.....	167,702.95	Michigan	152.70
Oregon	35,991.28	Indiana	300.00
Nebraska	23,243.22	Florida	341.42
Indian Territory	6,462.72	New Mexico	640.00
Alabama	5,956.79	Louisiana	739.73
Wisconsin	932.38	Washington.....	931.44
Kansas	524.70		
Mississippi	483.59	Total	244,680.74
Minnesota	197.82		

Or an increase in area, as compared with the previous fiscal year, of 135,544.72 acres.

Recapitulation of patents issued, as stated in the foregoing.

Patents.	1890.	1891.	Increase.	Decrease.
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
Agricultural	18,759,520.00	18,297,600.00	.....	461,920.00
Mineral	33,473.72	31,728.65	.....	1,745.07
Swamp lands	109,351.89	408,127.55	298,775.66	.....
Railroad lands	363,892.15	3,088,679.23	2,724,817.08	.....
Indian and miscellaneous	109,056.02	244,609.74	135,544.72	.....
Selections	539,779.84	756,172.91	216,393.07	.....
Total	19,915,043.62	23,826,909.08	3,375,530.53	463,665.07

Total net increase, 2,911,865.46.

MINERAL LANDS.

One thousand two hundred and forty-eight mineral entries, embracing 35,072.39 acres, were made.

Seventy-two coal entries were made, embracing 9,625.83 acres.

One thousand seven hundred and ninety-two mineral patents, embracing 2,260 mining claims and 226 coal patents, were issued, the coal patents embracing an area of 31,728.65 acres. This is an increase of over 23 per cent. of mineral and coal patents issued, and an increase of 50+ per cent. of mining claims patented, as compared with last year.

Two thousand three hundred and thirty-seven current mineral and coal entries were examined, an increase over last year of 41+ per cent., and 1,412 suspended mineral and coal entries were reexamined, as against 1,958 for previous year.

ADJUSTMENT OF RAILROAD LAND GRANTS.

The mileage of land-grant railroads actually constructed up to the close of the last fiscal year was 18,070.71 miles, no part of which was constructed during the year.

The lists of railroad selections awaiting examination at the close of the last fiscal year embrace 28,846,577.56 acres; the selections for wagon-roads embrace 305,246.67 acres; making an acreage of 29,151,824.23 acres embraced in pending lists of selections for railroad and wagon-road construction.

RIGHT OF WAY TO RAILROADS.

The whole number of railroad companies claiming right of way over the public lands, under the general right-of-way-act approved March 3, 1875, or under special acts, is 392, of which the articles of incorporation filed by thirty-two companies were approved during the last year.

VACANT PUBLIC LANDS.

By circular of June 10, 1891, the district officers were directed to report approximately the quantities of lands in the several counties and parishes in their districts not embraced in Indian or military reserva-

tions, remaining unappropriated by filing or entry. The records of this office are not kept by counties; but inasmuch as many inquiries have been received as to the quantity of unappropriated lands remaining in particular counties, parishes, or localities, it was concluded to make a statement for this report by counties so far as reports from the district officers in such shape could be obtained, and to make the statement by land districts in other cases.

It has not been practicable for many reasons, such as the magnitude of the work involved, the manner of creating the boundaries of counties and the frequent changes therein, and also the fact that a large part of the unsurveyed public domain lies within the limits of grants to railroads, to more than obtain approximate estimates of the lands not covered by entries or filings; but the statement will serve the purpose for which it is made, to wit: to inform correspondents and the general public as to whether there is much, little, or any public land in the several public-land States and Territories and the land districts therein, and in most instances in particular counties or localities.

Recapitulation of vacant lands in the public land States and Territories.

State or Territory.	Surveyed land.	Unsurveyed land.	Total.
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
Alabama.....	947,310		947,310
Arizona.....	11,342,214	43,718,791	55,061,005
Arkansas.....	4,998,398		4,998,398
California.....	36,326,517	15,972,982	52,299,499
Colorado.....	36,614,499	5,552,531	42,167,030
Florida.....	2,660,151	799,230	3,459,381
Idaho.....	4,740,786	29,041,065	33,781,851
Iowa.....	3,000	3,000	6,000
Kansas.....	799,078		799,078
Louisiana.....	1,141,729	101,289	1,243,118
Michigan.....	781,816		781,816
Minnesota.....	2,910,455	3,939,520	6,849,975
Mississippi.....	1,201,280		1,201,280
Missouri.....	1,023,898		1,023,898
Montana.....	10,790,999	63,581,770	74,372,769
Nebraska.....	11,065,436	395,000	11,460,436
Nevada.....	29,472,117	23,869,748	a 53,341,865
New Mexico.....	39,444,239	15,449,440	54,893,679
North Dakota.....	5,811,910	10,323,530	16,135,440
Oklahoma.....	1,230,917	2,271,489	3,502,406
Oregon.....	24,791,353	14,428,799	39,220,151
South Dakota.....	5,024,202	9,061,102	14,085,304
Utah.....	6,917,840	28,511,147	35,428,987
Washington.....	5,432,891	14,968,800	20,401,691
Wisconsin.....	1,003,133		1,003,133
Wyoming.....	38,794,084	12,048,350	50,842,434
Total.....	285,280,251	294,027,773	a 579,664,683

a This aggregate is exclusive of Ohio, Indiana, and Illinois, in which, if any public land remains, it consists of a few small isolated tracts; it is exclusive of the Cherokee Strip, containing 8,044,644 acres, and all other lands owned or claimed by the Indians in the Indian Territory west of the ninety-sixth degree of longitude, contemplated to be made a part of the public domain by the fourteenth section of the act of March 2, 1889 (25 U. S. Stats., 1005), and it is also exclusive of Alaska, containing 577,390 square miles, or 369,529,600 acres, of which not more than 1,000 acres have been entered under the mineral laws, and includes 356,659 acres of mineral land in Nevada, in addition to the quantities given under the head surveyed land and unsurveyed land in the foregoing table.

THE IRRIGATION OF THE PUBLIC LANDS.

From the remotest times of which there is any record down to the present, and in all quarters of the world, irrigation has been found necessary as a means for increasing the productiveness of the soil, or of imparting fertility where that quality was wanting.

It was not a thing to be expected that the States of this republic, with their diversity of climate and of soil, would be exempt from the

same necessity. The following, taken from Tomlinson's *Cyclopedia of Useful Arts* (vol. 1, p. 512), illustrates the fact stated, viz :

The importance and value attached to supplies of water in eastern countries are illustrated in many beautiful passages of Scripture, showing that water springs, rains, and dew were the most esteemed among earthly gifts, and therefore the most appropriate to be the figures of spiritual blessings. Other passages show that the art of irrigation was known to the earliest husbandmen. It has been supposed that the annual overflowing of the Nile, and the benefits derived to Egypt by that means, first suggested the idea of artificial irrigation to the Egyptians, and that other nations learned the art from them. The Egyptians practiced the art on a large scale, as the remains of their canals and vast artificial lakes testify. Various hydraulic machines were also used, some of which appear to have resembled the water wheels of the fen districts of England, and to have been worked by the feet of men, after the manner of the treadmill. This laborious method of watering the ground seems to have been common in Egypt during the sojourn of the children of Israel in that land, for Moses draws the following remarkable contrast between the climate and customs of Egypt, where rain seldom falls, and the more genial clime of the promised land. "For the land whither thou goest in to possess it is not as the land of Egypt, from whence ye came out, where thou sowest thy seed, and *waterest it with thy foot*, as a garden of herbs; but the land whither ye go to possess it is a land of hills and valleys, and drinketh water of the rain of heaven." (Deut. xi: 10, 11.)

The method of raising and distributing water in Egypt at the present time is thus described: Water from the Nile is collected at certain times in large cisterns on the banks of the river. For this purpose the screw of Archimedes was formerly used, but now leathern buckets or Persian wheels, are employed; these machines are placed all along the banks of the Nile, from the sea to the cataracts. When the grain crops, or the saffron, melons, sugar-canes, etc., require watering, a plug is taken out from the bottom of the cistern, and the water which gushes out is guided from one rill to another by persons whose office it is to manage the flooding of the ground.

Sometimes the water is merely raised by wicker baskets, lined with leather. Each basket is managed by two men, and is held by cords between them. Lowering and filling the basket at the river, they swing it over the banks into the canal, which conveys it at once to the land requiring water.

In Bengal the fields are diligently watered or they would yield little produce. Wells are dug in the highest parts, and by means of bullocks and a rope over a pulley water is raised in buckets, and carried in small channels to every part of the field. Without this diligent watering of the soil in hot countries rice, which furnishes food to the greater part of the human race, could not be cultivated. Accordingly over the vast region of southern Africa, the irrigation of the land by means of rivers, brooks, lakes, and wells is a labor essential to human life. A machine similar to the Persian wheel is used in China for raising water.

In southern Europe, also, irrigation is extensively carried on. In Italy, especially on the banks of the Po, it was practiced long before the time of Virgil, and is zealously continued to this day. The waters of all the chief rivers of northern Italy, as well as of numerous minor streams, are thus employed. From Venice to Turin the entire country is said to be one great water meadow, for the watering is by no means confined to grass lands, but is conveyed into the hollows between the ridges in corn lands, is distributed over the low lands, where rice is cultivated, and is carried round the roots of vines. It was from Italy that the practice gradually spread throughout the south of France, and from thence to Spain and Britain.

The conducting of water from rivers and canals, and measuring it out in certain quantities, is consequently an important business of southern Europe, and also forms a nice part of the science of engineering. In Lombardy the water of all the rivers belongs to the State. In the Venetian territories the government not only claims the rivers, but also the smallest springs, and even collections of rain water. In renting the water of rivers from government, contracts are made to pay so much for the use of the water for an hour or half an hour at a time, or for so many days at certain periods of the year. A person desiring to irrigate his lands has the right of making a canal through another estate, which may lie between him and the river, being bound, however, to pay the owner the value of the land, and to avoid bringing the canal close by the mansion or through the garden of the proprietor. The rent of land having the means of irrigation is one-third higher in northern Italy than that of lands not so provided. As may be supposed, the utmost care is bestowed in economizing the precious fluid.

Until recently the subject of irrigating the public lands of the United States has received but little attention. For many years the vast public domain was held by the government open to settlement, and the portions favored by nature with a plentiful rainfall and consequent

moisture and fertility of the soil, as the most desirable, were first appropriated by settlers, leaving the arid regions vacant and unoccupied.

In some sections of deficient rainfall but of comparatively easy irrigation, settlers have gone on the land, and by such means as were at their command have succeeded in conveying thereto the water necessary for fertilization. By these examples it has been demonstrated that vast tracts of land now classed as desert and practically valueless may be rendered exceedingly productive and valuable if water can be procured and conducted upon them.

What quantity of the remaining public lands is of this character has never been definitely ascertained, but it is understood to comprehend many millions of acres. In the "Public Domain," a work prepared and published in 1883 by commissioners acting under Congressional authority, the quantity of arid public land classed as irrigable from the water supply then available, was estimated at 30,000,000 of acres, while the quantity suitable only for pasturage or grazing, and desert, useless for agriculture by reason of altitude or lack of water or soil, is in the same work put down at over 300,000,000 of acres.

Knowledge acquired since 1883 concerning the arid region and its available water supply, justifies me in estimating the area of good soil which may be reclaimed, through a system of storage reservoirs, at more than 120,000,000 acres.

Congress has heretofore legislated for the encouragement of irrigation by individual effort. Examples of this legislation are to be found in the act of March 3, 1875 (18 Stats., 497), having reference to desert lands in Lassen county, Cal., and the more general provisions of the desert-land act of March 3, 1877 (19 Stats., 377), as amended by act of March 3, 1891 (26 Stats., 1095).

Experiments have also been tried for the same end by the sinking of artesian wells in certain localities under Congressional provisions. It appears that, under the desert-land law of 1877, reclamation has been made and final proof produced in 5,366 entries, with an estimated area of 1,717,120 acres.

It is apparent that the public interests involved call for much more efficient measures than any yet put in operation for the reclamation of the arid lands now practically worthless, but capable, by proper efforts, of being rendered a source of almost incalculable wealth.

In the progress of the settlement of the public domain, it has become a question of the greatest practicable importance how the thousands of people now yearly seeking homes on the public lands from all quarters of the republic, and who may be expected to do so hereafter, are to be provided with the homes for which they seek. Very little desirable public land remains unappropriated outside of the boundaries of what may be termed the arid region. That the demand for homes on the public domain is greater than ever before in the country's history may reasonably be inferred from recent experience in the opening of Oklahoma Territory for settlement. On an average there appeared upon the ground, within 24 hours after the land was thrown open for settlement by the President's proclamation, at least two qualified entrymen for every desirable quarter section of land in the Territory. In consequence of the abnormal demand and the limited acreage, conflicting claims arose which have resulted in long, vexatious, and expensive contests. This unusual demand for land in Oklahoma did not arise because of any special preference for the climate or soil, but because of the very limited area of public land remaining upon which a settler can raise crops without artificial irrigation. There are millions of acres of land

in the arid region with soil equal if not superior to that found in Oklahoma, in sections of the country where the climate is equally desirable, upon which no one attempts to settle, for the reason that a water supply for irrigating purposes can not be secured at such expense as the settlers are able to undergo.

It has been demonstrated that these arid lands, when reclaimed by a sufficient water supply proper for irrigation, produce abundant crops for an indefinite period of time and with unfailing regularity. Water conducted from streams or reservoirs to the land and distributed over its surface in the process of irrigation, seems to act as a powerful fertilizing agent.

Generally speaking, the water supply in the flowing streams is inadequate during the irrigating season, which usually covers the months of June, July, and August, to irrigate any great extent of country. The supply thus available has been to a very great extent appropriated by early settlers on what is termed the first or creek bottom lands. In consequence it is manifestly necessary, in order to secure a water supply for the extensive plateaus which stretch many miles on either side of nearly every stream, that the flow of water through the entire year should be stored and conducted from the reservoirs in canals during the irrigating season to the lands to be cultivated.

Owing to the elevation of these plateaus above the level of the streams, it is frequently necessary to construct canals many miles in length on a slight grade in order to conduct the water of the stream to the highest point on the land to be reclaimed. Again, in order to store the water supply of the entire year for use during the season when it is needed, reservoirs of great capacity must be constructed, and of such strength as will insure the safety of persons residing in the valley below. Until such reservoirs and canals shall have been constructed the reclamation of the great body of arid lands can not be accomplished, and until this is accomplished settlement and cultivation can not take place.

While an individual settler might reclaim a small tract of land situated on the first bottom and a little above the level of the stream, he can not with his limited means successfully accomplish the same result on the bench or uplands. It is therefore clear that persons contemplating settlement can not cope with the situation. It is equally clear to my mind that Congress can never be induced to appropriate money from the public Treasury to construct necessary reservoirs and canals. Congress will not pass any law likely to result in transferring title to such large bodies of these arid lands to corporations as would induce private capital to embark in this stupendous undertaking as an investment.

The genius of our institutions and the universal desire of our people to own homes stand alike in stubborn opposition to the acquisition of title to extensive tracts of land by corporations. Landlordism, as known in other countries, can never expect sympathy or support in this country.

The government should see to it that every honest man devoted to the flag, who is willing to make an industrious effort to secure a home of his own, should have every encouragement, and as few impediments as possible left in his way. But we have reached a point where settlement on the public domain has been checked by a great natural difficulty, with which the individual settler can not successfully grapple, and the general government may not appropriate money to overcome.

The tables given in this report show that during the fiscal year end-

ing June 30, 1891, there was a falling off in original homestead entries made, as compared with the fiscal year ending June 30, 1890, of 2,642 in the number of entries, and 491,284.38 acres in the quantity of land taken up thereby. In final entries of the same class the decrease was 394 in the number of entries, and 106,005 acres in the quantity of land, while the total net decrease in the number of final entries of all kinds during the same period, as compared with the last preceding fiscal year, was 7,736, and in the quantity of land, 1,252,966.39 acres.

Is it sound policy for the government to remain inactive, while home-seeking citizens are exhausting each other's strength and substance in a fierce struggle to obtain title to the small remaining area on which the rainfall is sufficient, while it may be possible, through a wise policy, to enable every one seeking a home to secure it on the face of the reclaimed desert? There can be but one answer. The problem is a serious one, and its prompt solution is quite as important as its wise solution.

Preliminary steps have been taken, pursuant to act of Congress, for the selection and withdrawal from disposal, for such use as may hereafter be decided upon, of proper sites for reservoirs for irrigation purposes. Under the provisions of the acts of Congress approved October 2, 1888 (25 Stats., 527), August 30, 1890 (26 Stats., 391), and March 3, 1891 (26 Stats., 1101), the Director of the Geological Survey has selected 181 sites for irrigating reservoirs, containing an estimated area of 547,012.12 acres, of which 161,768.36 acres appear to have been previously appropriated under the homestead, preemption, timber, and desert land laws of the United States, or as falling within prior Congressional grants, leaving 385,243.76 acres not otherwise appropriated.

The selections are distributed as follows:

Public lands selected for reservoir sites in the United States.

Location.	No. of sites.	Acres.	Location.	No. of sites.	Acres.
Utah	1	105,392.04	Montana	35	34,436.70
Nevada	3	2,717.67	California	44	19,739.36
New Mexico	39	40,170.20			
Colorado	55	32,787.79	Total	181	385,243.76
Idaho (probably)	1	150,000.00			

While these reservoir selections as made are of doubtful utility for practical purposes, conceding their value, the question is still open as to the proper method of attaining the purpose in view. There are two ways eligible: First, to pursue a policy indicated in a recent act of Congress, encouraging private capital to engage in the enterprise. This policy must necessarily result in passing the ownership of water, and consequently the control of the land, to corporations. A wiser plan, it seems to me, would be the transfer of the land and water to the direct control of the States, subject to such limitations and restrictions as would insure the reclamation of the land by the States, and the transfer of title from the State in the first instance to actual settlers in quantity not exceeding, say 160 acres of land to each settler. When the title becomes securely vested in actual settlers on the land there need not be any apprehension of danger from the action of the settlers in disposing of their homes. On the reclaimed desert, as elsewhere, the homestead will in general be more valuable to the family owning and living upon it than to any one else. Hence, the general government will have carried into effect its ancient and wise policy in providing as

a condition of the grant that no State shall convey more than a limited area of the land to any one person, and further that such person shall be an actual settler on the land conveyed to him or her, and shall be possessed of such other qualifications as in the wisdom of Congress may seem proper.

The conditions suggested might be made effective by providing that any violation thereof should operate as a forfeiture of the land to the government of the United States.

The unsatisfactory experience following the granting of swamp lands to the States may be suggested as an objection of some potency against a similar policy with reference to the arid portion of our public domain. The experience mentioned should not be overlooked, nor should it be accorded an importance in its application to the pending question to which it is not entitled.

The total area of swamp land was estimated at the time of the grant at from 5,000,000 to 20,000,000 acres. This was but an insignificant fraction of the surface of the States in which the land was located. The remainder of the surface of those States was valuable productive soil. Hence, the so-called swamp lands were of little consequence to the great body of the people. The disposition made of the swamp land was a matter of slight concern to the States, and therefore the attention given the subject was mainly given by claim agents and speculators whose success in driving bargains was largely attributable to the fact that the quantity of land involved was comparatively small and the public interest smaller still. We are now dealing with a subject of vital importance to the States whose entire arable surface is involved. The future prosperity of every desert land State depends on the wisdom and practical character of the legislation enacted to facilitate and encourage the reclamation of our arid lands. Every man in the country who desires or may desire to secure a home on the public domain is interested.

While the swamp-land-grant States may have been indifferent and unwise in dealing with a grant which was but a merely incidental matter, the desert-land-grant States could not afford to thus deal with and consider a question of vital importance. Indifference would court adversity and recklessness would bring ruin.

When a proposition of this gravity is submitted to any organized body of American citizens directly interested in its wise consideration and solution, they will consider wisely and act well.

The magnitude of the interests involved and the far-reaching effects for good or ill of the action which may be taken constrain me to be content with suggesting the necessity, from my point of view, of calling the attention of Congress to conditions which seem to demand prompt and thoughtful consideration. In connection with the subject I have ventured to briefly outline my views as to the course I think may be safely followed to reach the desired result.

* * * * *

THE FORESTS OF THE PUBLIC DOMAIN.

Under the above title my predecessor in office in the last annual report called attention to the fact that the most valuable timber on the public lands is being rapidly exhausted; and that the several land laws at that time in force were inadequate to properly protect either the public forests from unlawful appropriation, or the interests of the set-

tlers engaged in developing the country, to whom the use of public timber to a certain extent is essential.

During the past year Congress has legislated on the subject of public timber. Section 24 of the act passed on the 3d of March last, entitled "An act to repeal timber-culture laws and for other purposes," and the additional act passed on the same date to amend section 8 of said act, will, I apprehend, as regards certain portions of the country, go far towards remedying existing evils.

The recent date of this legislation has not permitted the practical operation of these laws, and admits of no definite forecasting as to ultimate results, yet it would seem that the provision made thereby for the establishment of reservations will do much in the way of caring for portions of the public lands bearing forests which it is needful to preserve from spoliation; and in like manner the amendatory act appears to allow in certain portions of the country full room for utilizing public timber to supply the present and pressing necessities of farmers, miners, and others engaged in developing the resources of the country.

Such being the anticipated results of this action of Congress, it is to be regretted that it did not extend to the enactment of a general law which should insure equal rights in the matter to all throughout the public land States by according uniform privileges without discrimination in respect to localities or industries.

A glance at the situation as presented by the statutes now in force is sufficient to show that the charge heretofore made of undue discrimination in this matter, resulting in working great hardship in certain sections, is still a matter of complaint throughout those portions of the public land States and Territories not affected by the amendatory act of March 3, 1891. It needs no argument to show that great injustice is involved in according special privileges to industries in certain localities, while other portions of the country are left under a severely restrictive enactment (section 2461, U. S. Rev. Stats.), the operation of which is to make the taking of public timber for any purpose whatever a crime.

It still remains, therefore, for this office to urge, as heretofore, that a general law in respect to public timber be enacted, repealing statutes found to be objectionable or inoperative, and which, while absolutely prohibiting public timber or its products from exportation from our shores and providing for the protection and preservation of trees and undergrowth in localities where the same is necessary for climatic, economic, or other reasons, will, at the same time, permit the free, legitimate, and judicious use of public timber in other localities for all purposes required in building up and settling the country and developing its natural resources.

My experience thus far in administering the public land laws has convinced me that the necessity still remaining for a general law of this nature can not be too strongly urged upon the attention of Congress.

The provisions of such law I am of opinion should be in line with those suggested in the report by this office to the department on Senate bill 1394, which was made March 10, 1890. (See Land Office Report for 1890, page 85).

The conditions and requirements to be met in different localities are so varied, that it will be found difficult, if not impossible, to prepare a general law which will apply justly and effectively to all of such various conditions and requirements. Only general safeguards can be provided by Congress for the preservation of our forests. The general law

might, with wisdom, delegate to the legislatures of the several States and Territories authority to enact laws, not in conflict with the act of Congress, to govern, regulate, and control the cutting, sale, and disposition of timber on the public domain.

This would bring the local governments to the aid of the general government, and, in my judgment, the result would prove satisfactory. The citizens of each State and Territory are directly interested in the preservation of the timber therein, and, in obedience to the demands of such interests, the authority delegated would undoubtedly be employed to prevent waste and unnecessary destruction.

The general law would undoubtedly subserve the purpose of forest preservation if it were so framed as to facilitate the acquisition of title by each actual settler on agricultural land in the vicinity of a limited area of timber land. Each individual would jealously guard his own timber, and through such individual effort, stimulated by direct interest, the public good would be most effectively promoted.

I desire, in this connection, to call attention to the disadvantage incident to the execution of the laws through special agents, in consequence of the form in which appropriations have been made by Congress for this service.

For the current fiscal year the appropriation in this behalf reads as follows:

DEPREDACTIONS ON PUBLIC TIMBER: To meet the expenses of protecting timber on the public lands, one hundred thousand dollars.

PROTECTING PUBLIC LANDS: For the protection of public lands from the illegal and fraudulent entry or appropriation, one hundred and twenty thousand dollars.

SETTLEMENT OF CLAIMS FOR SWAMP LAND AND SWAMP LAND INDEMNITY: For salaries and expenses of agents employed in adjusting claims for swamp lands and for indemnity for swamp lands, twenty thousand dollars: *Provided*, That agents and others employed under this and the appropriations for "Depredations on the public timber," and "Protecting public lands," while traveling on duty, shall be allowed per diem in lieu of subsistence at a rate not exceeding three dollars per day, and for actual necessary expenses for transportation.

Now, the Comptroller of the Treasury holds that the per diem and expense account of an agent appointed to investigate public-timber trespasses can not be allowed when it appears that the agent was employed during the time stated in the work of investigating fraudulent entries of public land, or in reporting on swamp land selections. The same rule is applied to each of the three classes of agents.

It not infrequently occurs that swamp land selections, fraudulent land entries, and timber depredations are to be investigated in the same locality. Under the law, as heretofore framed in such case, it is absolutely necessary, regardless of expense or loss of time, to send three agents to the locality referred to, when one agent could investigate and report all the cases in a particular neighborhood, taking them up in proper order. By adopting this method of procedure the expenses of transporting additional men would be avoided and the time lost in unnecessary travel could be profitably employed. In other words, the efficiency of the service would be promoted and the expenses reduced.

Actuated by these considerations I have, in submitting estimates for the coming fiscal year, consolidated the three items for this special service in the following language, to wit:

DEPREDACTIONS OF PUBLIC TIMBER, PROTECTING PUBLIC LANDS, AND SETTLEMENT OF CLAIMS FOR SWAMP LANDS AND SWAMP LAND INDEMNITY; to meet expenses of protecting timber on public lands and for the more efficient execution of the law and rules relating to the cutting thereof; of protecting public lands from illegal and fraudulent entry or appropriation, and of adjusting claims for swamp lands and indem-

nity for swamp lands: *Provided*, That agents and others employed under this appropriation shall be allowed per diem in lieu of subsistence at a rate not exceeding \$3 per day and actual necessary expenses for transportation; three hundred thousand dollars.

Under this form of appropriation agents may with freedom be assigned to duty in either branch of the service.

The estimate for the next fiscal year is placed at \$300,000, being an increase of \$60,000 over the appropriation for the current year for three reasons;

First. Examinations and investigations connected with the administration of the law approved March 3, 1891, sec. 8 (26 Stat., 1095) as amended by act of same date (26 Stat., 1093) will be necessary, and will add greatly to the existing demands for the services of special agents, in order to admit of the proper exercise of the authority given to the head of the department to designate the sections or tracts of the public domain on which the cutting of timber should be permitted, and to enforce needful rules and regulations governing the matter. The same is true with reference to the exercise of discretion in the selection of public lands bearing forests, which should be reserved by proclamation of the President under the 24th section of said act, in order to give the effect intended to the provisions thereof.

Second. The seventh section of the same act confirms entries of public land under specified conditions, which will relieve this office of much of the accumulated arrears of work left over from former years, but there will still remain a large accumulation of cases which must be disposed of by the necessary investigations and adjudications before the clerical force of the office can be devoted to disposing of current cases with reasonable promptness as they arise. An increased force of special agents is deemed necessary to aid in the disposal of these accumulated cases.

Third. The said seventh section allows the period of 2 years from the date of final certificate and receipt during which entries under the preëmption, homestead, desert-land, or timber-culture laws may be subject to investigation and their validity passed upon by this department, and enacts that at the expiration of that period, when there shall be no contest or protest pending against the validity of any such entry, the entrymen shall be entitled to a patent conveying the land by him entered, and the same shall be issued to him. The purpose to be attained therefore is, after disposing of the accumulated cases referred to, so to employ the available force that all cases arising in the current business may be disposed of, or the sufficiency of the proof adduced to show the bona fide character of the claims passed upon by this office within the legally prescribed period of 2 years from final entry. It is thought that the increased force of special agents proposed to be provided for would be a material aid in accomplishing the purpose indicated.

Respectfully submitted,

THOMAS H. CARTER,
Commissioner.

Hon. JOHN W. NOBLE,
Secretary of the Interior.

Historical and statistical table of the United States and Territories, showing the areas of each in square miles and in acres, the date of organization of Territories, date of admission of new States into the Union, the population of each State and Territory at the taking of the census in 1890, and the area surveyed and remaining unsurveyed up to June 30, 1891.

Civil divisions.	Act organizing Territory.	United States Statutes.		Act admitting State.	United States Statutes.		Area of the States and Territories—		Number of acres sur- veyed up to June 30, 1891.	Area re- maining un- surveyed on June 30, 1891.	Population in 1890.
		Vol.	Page.		Vol.	Page.	In square miles.	In acres.			
THIRTEEN ORIGINAL STATES.											
New Hampshire								9,280	5,939,200		376,530
Massachusetts								7,800	4,992,000		2,228,943
Rhode Island								1,808	835,840		245,096
Connecticut								4,750	3,040,000		746,258
New York								47,000	30,080,000		6,897,823
New Jersey								8,320	5,324,800		1,444,932
Pennsylvania								46,000	29,440,000		5,255,014
Delaware								2,120	1,356,800		108,483
Maryland								11,124	7,119,360		1,042,390
Virginia								38,348	24,542,720		1,635,890
North Carolina								50,704	32,450,560		1,617,947
South Carolina								34,000	21,760,000		1,151,149
Georgia								58,000	37,120,000		1,837,353
STATES ADMITTED.											
Kentucky				Feb. 4, 1791	1	189	37,680	24,115,200			1,858,635
Vermont				Feb. 18, 1791	1	191	10,212	6,525,680			822,422
Tennessee				June 1, 1796	1	491	29,184,000	29,184,000			1,767,818
Maine				Mar. 3, 1820	3	544	85,000	22,400,000			661,086
Texas				Dec. 29, 1845	9	108	274,356	175,584,840			2,230,539
West Virginia				Dec. 20, 1862	12	633	23,000	14,720,000			762,794
PUBLIC-LAND STATES AND TERRITORIES.											
States.											
Ohio	Mar. 2, 1805	2	331	Apr. 30, 1802	2	173	30,972	25,581,976	25,581,976		3,472,316
Louisiana	May 7, 1800	2	58	Apr. 8, 1812	2	701	44,803	28,731,000	27,130,970	1,600,130	1,118,587
Indiana	Apr. 7, 1796	2	649	Dec. 10, 1816	3	369	32,809	21,637,760	21,637,760		2,192,404
Mississippi	Feb. 3, 1800	2	514	Dec. 10, 1817	3	472	47,156	30,179,840	30,179,840		1,280,600
Illinois	Mar. 3, 1817	2	371	Dec. 14, 1819	3	696	55,414	35,405,093	35,405,093		3,826,351
Alabama	June 4, 1817	2	743	Dec. 14, 1819	3	698	50,722	32,462,115	32,462,115		1,513,617
Missouri	Mar. 2, 1819	2	483	June 15, 1820	3	645	65,770	41,856,031	41,856,031		2,479,184
Arkansas	Jan. 11, 1805	2	309	Jan. 20, 1837	5	144	52,302	33,410,003	33,410,003		1,128,179
Michigan		2	309	Jan. 20, 1837	5	144	56,431	36,126,640	36,126,640		2,093,893

Florida.....	Mar. 30, 1892	2	654	Mar. 3, 1815	5	742	59,298	37,031,520	30,830,857	7,100,863	201,422
Iowa.....	June 12, 1898	5	255	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,911,866
Wisconsin.....	Apr. 20, 1896	5	10	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,698,580
California.....	Mar. 3, 1849	9	403	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Minnesota.....	Aug. 14, 1849	10	425	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Oregon.....	Mar. 3, 1849	9	403	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Kansas.....	May 30, 1854	10	425	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Nevada.....	Mar. 3, 1861	12	277	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Nebraska.....	May 30, 1861	12	277	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Colorado.....	Mar. 3, 1861	12	277	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Wyoming.....	July 10, 1890	15	172	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Washington.....	Mar. 2, 1853	15	172	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Montana.....	May 26, 1864	13	85	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
North Dakota.....	Mar. 2, 1861	12	239	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
South Dakota.....	Mar. 3, 1863	12	808	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Idaho.....	Sept. 9, 1850	9	446	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
New Mexico.....	Feb. 24, 1863	12	464	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Arizona.....	July 27, 1868	15	240	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Alaska.....	Mar. 3, 1701	1	120	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Indian.....	July 10, 1790	1	214	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
District of Columbia.....	May 2, 1890	26	81	Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Oklahoma.....				Mar. 3, 1817	5	742	55,045	35,229,800	35,229,800		1,208,150
Total.....											

a Census not completed up to June 30, 1891.

Location, area in acres, and present status of unlawful inclosures of public land.

States and Territories.	Pending July 1, 1890.		Received.		Action taken.							
					Suit recom- mended.	Filed.				Facts laid before United States attorney.		
	No.	Area.	No.	Area.		No.	Area.	No.	Area.			No.	Area.
Arizona	1	90	1	640	.....	1	640	.....	.....	1	640	
	.....	.....	1	640	.....	.....	.....	.....	.....	.....	.....
	.....	.....	1	640	.....	.....	.....	.....	.....	.....	.....
California	1	90	3	1,920	.....	1	640	.....	.....	1	640	
	.....	.....	1	150	.....	1	1,260	.....	.....	.....	.....
	.....	.....	1	1,260	.....	.....	.....	.....	.....	.....	.....
Colorado .....	.....	.....	1	200	.....	.....	.....	.....	.....	.....	.....
	.....	.....	1	(a)	.....	.....	.....	.....	.....	.....	.....
	.....	.....	4	1,610	.....	1	1,200	.....	.....	.....	.....
Michigan	1	1,960	1	1,880	1	1,420	1	1,960	.....	.....	1	1,880
	1	1,370	.....	.....	1	2,500	1	20,360	.....	.....	.....	.....
	1	20,360	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montana	1	1,420	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1	2,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1	8,600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nevada	6	45,210	1	1,880	2	3,920	3	30,920	.....	.....	1	1,880
	.....	.....	1	88	.....	.....	.....	.....	1	88	.....	.....

New Mexico	1	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1	12,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oregon	1	210	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1	530	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1	6,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah	6	19,890	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1	11,500	.....	.....	.....	.....	.....	1	11,500	.....	.....	.....
	1	3,900	.....	.....	.....	.....	.....	1	3,900	.....	.....	.....
Washington	2	15,400	.....	.....	.....	.....	.....	2	15,400	.....	.....	.....
	1	400	.....	.....	.....	1	400	1	330	1	300	.....
	1	300	.....	.....	.....	.....	.....	.....	.....	1	100	.....
Wyoming	1	330	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1	1,640	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total ..	5	2,770	.....	.....	.....	1	400	1	330	2	400	.....
	1	1,300	1	(a)	.....	1	1,300	1	(a)	.....	.....	.....
	1	.....	1	(a)	.....	.....	.....	.....	.....	.....	.....	.....
Grand total ..	1	1,300	2	(a)	.....	1	1,300	2	(a)	.....	.....	.....
	1	(a)	1	26,340	.....	.....	.....	.....	.....	.....	.....	.....
	1	8,340	1	1,560	.....	.....	.....	.....	.....	.....	.....	.....
Grand total ..	2	8,340	2	27,900	.....	.....	.....	.....	.....	.....	.....	.....
	1	600	1	960	.....	.....	.....	.....	.....	.....	.....	.....

Grand total ..	1	11,300	.....	.....	.....	.....	.....	1	11,300	.....	.....	.....
	1	38,000	.....	.....	.....	.....	.....	1	38,000	.....	.....	.....
	2	49,300	.....	.....	.....	.....	.....	2	49,300	.....	.....	.....
Grand total ..	26	142,900	13	34,358	2	3,920	7	43,520	8	65,118	4	2,920

(a) Signifies area not given.

REPORT OF THE COMMISSIONER OF INDIAN AFFAIRS.

DEPARTMENT OF THE INTERIOR,
OFFICE OF INDIAN AFFAIRS,

October 1, 1891.

SIR: I have the honor to submit the Sixtieth Annual Report of the Commissioner of Indian Affairs.

A SETTLED INDIAN POLICY.

A variety of causes have of late conspired to stimulate public interest in the subject of Indian administration, and to provoke a very widespread discussion of the so-called Indian problem. As was to be expected, there has been a great diversity of views expressed, and many discordant theories advanced as to its proper solution. I think, however, there is coming to be a very general consensus of opinion as to the essential elements that should enter into the settled policy of the Government in all its dealings with these people, and I venture to suggest the most important of them here with a view of furnishing a test of the present administration.

(1) *Comprehensiveness*.—It is important that any theory shall rest primarily upon a careful induction of all pertinent facts. No two reservations are exactly similar, and no two tribes present the same condition. The Indians, while alike as belonging to one common race and as sustaining to the United States Government the general relation of wards, differ among themselves very widely in language, manners, customs, religion, and environment. They represent a great number of distinct phases of human development.

Some are yet very degraded, living a mere animal life with few of the characteristics of humanity, while others have already become absorbed into our national life and are not distinguishable from their fellow citizens. Some still live by hunting and fishing; others, like the Navajos, are successful herders; many cultivate the soil with an increasing degree of success, and others already participate in manufacturing, mercantile, and professional life. While some, like the White Mountain Apaches, are almost destitute of anything that may be characterized as education, others, like the Poncas and the Pawnees, have almost all their children of suitable age in school. While the great majority of the 250,000 receive absolutely nothing directly from the Government in the way of subsistence or support (see Appendix, p. 147), others, like the Sioux, Cheyennes, Arapahoes, and Apaches, are dependent largely upon Government rations.

Although many, like those just mentioned, are under the immediate control of the Government and require more or less of vigilant surveillance, multitudes of others, such as the Indians in New York, those in Michigan, and the 65,000 of the five civilized tribes, are only nominally under Government control, while thousands, like the Santee Sioux, the Sissetons and Wahpetons, the Nez Percés, the Puyallups, etc., are, by the operation of the land-in-severalty law, becoming citizens and gradually passing out from under governmental supervision.

Any theory which ignores these essential facts and attempts to deal with them *en masse* must, of necessity, be radically and fatally defective. Any rational scheme, therefore, must rest upon a careful survey

of the present condition, needs, and possibilities of each of the tribes, and must also, of necessity, be very general in its character.

(2) *Definiteness of aim.*—There has hitherto been more or less confusion in the public mind as to precisely what the Government is aiming to accomplish, and so long as this uncertainty exists there can be no considerable progress toward determining the best measures to be adopted. If it were the purpose of the Government to exterminate the Indians by violence, or to leave them to shift for themselves under such circumstances that their destruction would be only a question of time, this purpose would necessarily determine legislation and administration. If the object were to simply guard them as prisoners of war, feeding and supporting them in idleness, as it is sometimes asserted the Government is doing, without regard to the future outcome of this policy, this purpose should be clearly avowed and should have its weight in determining everything pertinent to Indian matters.

If, however, the purpose is to incorporate the Indians into the national life as independent citizens, so that they may take their places as integral elements in our society, not as American Indians but as Americans, or rather as men, enjoying all the privileges and sharing the burdens of American citizenship, then this purpose should be not only clearly and definitely stated, but should be dominant in all matters of legislation and administration. It should be understood not only by our own people but by the Indians themselves, and should be inculcated as a fundamental doctrine in every Indian school.

No pains should be spared to teach the rising generation that the old condition of things is rapidly and forever passing away, and that they must prepare themselves for self-support. This is the inevitable, from which there is no escape. They should be taught that their future lies largely in their own hands, and that if they improve the opportunities for education now so generously offered them by the Government, they may become intelligent, prosperous, strong, and happy; but that if they neglect them they will be swept aside or crushed by the irresistible tide of civilization, which has no place for drones, no sympathy with idleness, and no rations for the improvident.

(3) *Clearness of outline.*—In the process of elevating a rude and barbarous people to the plane of civilization there is involved a combination of many forces—heredity, tradition, soil, climate, food supply, and the needs of surrounding civilization. There are also involved the great forces of legislation, administration, and institutions—such as industrial schools and missionary agencies—and a failure to comprehend the legitimate work of each of these great factors leads inevitably to gross errors in judgment. We can not gather grapes from thistles nor figs from thorns.

Perhaps one of the most mischievous fallacies is the assumption that because the Anglo-Saxon race has been centuries in developing its present proud civilization it is therefore necessary that the same length of time should be consumed by the Indians in passing through the successive stages of economic and social evolution. Time as an element in human progress is relative, not absolute. Indian children taken from a life which represents Anglo-Saxon barbarism of more than a thousand years ago may, if placed at an early age in proper relations with modern civilization, enter very largely into participation of the best results of nineteenth century life. A good school may thus bridge over for them the dreary chasm of a thousand years of tedious evolution.

(4) *Adaptation of means to ends.*—If the Indians are expected to thrive by agriculture they should not be thrust aside onto sterile plains or into

the mountains, but should be allowed to occupy such portions of the country as are adapted to agricultural pursuits. If the forces of nature are too strong for them to cope with single-handed, then they should have such assistance from the Government as will enable them to succeed. A little timely help would, in many cases, be sufficient to put them upon the road to self-support and independence when withholding would doom them to hopeless struggle. If we expect the rising generation to become intelligent, we should see to it that they have ample opportunities for education. If we design that they should be industrious we should encourage among them all forms of handicraft. If we wish them to become self-reliant we should throw them upon their own responsibility and exact of them strict obedience to law. If we expect them to be just we should set them an example. It is as true in our dealings with them as it is in the natural world that "Whatsoever a man soweth that shall he also reap."

(5) *Justice.*—The charge most frequently brought against the American people in reference to their dealings with the Indians is that of injustice. This charge is sometimes flippantly made, and oftentimes rests upon no historical basis, and yet it is unfortunately true that the impression widely prevails in the popular mind and is deeply rooted in the mind of the Indians that treaties have been broken and that the Government has failed in numerous instances to perform its most solemn obligations. It certainly cannot be said that this great nation has intended to be unjust, and recent acts of legislation have shown conclusively a desire not only on the part of Congress, but of the people of the country generally, to fulfill to the letter all the obligations, promises, and even expectations of the Indians.

But justice is two-sided. It demands as well as concedes. While it is desirable that we should pay the Indians to the last dollar all that is due them, we should expect of them the fulfillment of their obligations. They should be held to a strict accountability for their deliberate actions, and where, without provocation, they go upon the warpath, commit outrages, destroy property, or otherwise disturb the peace, they should be punished.

It is also worthy of consideration that in the past we have made agreements which later developments have shown to be unwise and undesirable both for them and for us. Such are all those treaties which recognize the autonomy and perpetual independent nationality of the tribes. One great political truth has been made absolutely clear by the march of events, and that is that the people of the United States constitute one nation. There is no place within our borders for independent, alien governments, and the Indians must of necessity surrender their autonomy and become merged in our nationality. In requiring this we do not ask that they concede anything of real value to themselves, but only that for their highest welfare they abandon their tribal organizations, their provincialisms, their isolation, and accept in lieu thereof American citizenship and a full participation in all the riches of our civilization. By this great transformation they are the gainers, rather than we ourselves.

(6) *Firmness.*—Thousands of them are yet in a stage of childhood; they are living in the twilight of civilization, weak, ignorant, superstitious, and as little prepared to take care of themselves as so many infants. It is therefore unwise, out of excessive regard for their manhood, to defer wholly to their wishes with reference to what is clearly for their good. The allotment of land, the restriction of the power of alienation, the compulsory education of their children, the destruction

of the tribal organization, the bestowment of citizenship, the repression of heathenish and hurtful practices, the suppression of outbreaks, and punishment for lawlessness are among the things which belong unmistakably to the prerogatives of the National Government.

Equally evident is it that those who, by the beneficent aid of the Government or otherwise, have been rendered capable of self-support must depend upon themselves and not look to it for help. There is no more reason why the General Government should feed and clothe an Indian who is able to feed and clothe himself by his own industry than there is why it should feed and clothe any other man.

The circumstances that justify and require the establishment and maintenance for a time of industrial schools, in which Indian youth may be trained for self-support, are exceptional and transitory, and in the very nature of the case will pass away. All that can be asked is that a reasonable opportunity be afforded to these people whereby their children can be lifted onto a plane where they will have something like an equal chance in life's struggles along with the more favored races in this country. If, after this reasonable preparation, they are unable or unwilling to sustain themselves, they must go to the wall. It will be a survival of the fittest. It is rightly claimed that thus far they have not had an equal chance with the rest of us, by reason of their isolation, and the present effort of the Government in the establishment of costly Indian schools is for the purpose of removing this inequality and bringing the Indian children into competitive relations with other children. Justice demands this, but it asks no more.

(7) **Humanity.**—It should be borne in mind, however, that this peculiar people are our brethren, made of the same blood, and as such have claims upon us. This vast country which is now the scene and the support of our greatness once belonged to them. Step by step they have been driven back from the hills and beautiful valleys of New England, the fertile fields of Ohio, the prairies of the West, until to-day, for the most part, they are gathered together on reservations poorly suited for agricultural purposes, and where the conditions of life are the hardest. The buffalo and the deer, which only a few years ago were found in countless thousands and afforded them food, raiment, barter, and occupation, are about gone, and they are, in many cases, driven by stress of circumstances over which they have no control to desperate straits for food. As a people they are poor and weak and well-nigh helpless. The vast and resistless tide of European emigration and the overflow of our aggressive population have despoiled them of their hunting grounds, robbed them of their richest fields, restricted them in their freedom, destroyed thousands of them in battle, and inflicted upon them great suffering.

A large part of this, of course, has been the inevitable consequence of the conflict of a higher, stronger civilization with a lower and weaker one. In this day of our greatness and prosperity we can afford to treat them with the greatest kindness. We can not afford to be cruel. For their own sake, and for ours as well, and for the sake of the history we are making as a Christian nation, we should treat them not only justly and humanely, but with as much generosity as is consistent with their highest welfare. This we are doing.

(8) **Radicalness.**—"Whatever is worth doing is worth doing well." The course of the Government has not always been self-consistent. Legislation has been tentative and administration fitful. Many things have been attempted, but few have been accomplished. Now that there is coming to be a pretty well recognized and rational policy, it should be

carried into execution with as much vigor as is practicable, to the end that the results anticipated from it may be reached as speedily as possible.

If the policy of allotting lands is conceded to be wise, then it should be applied at an early day to all alike wherever the circumstances will warrant. If we have settled upon the breaking up of the tribal relations, the extinguishment of the Indian titles to surplus lands, and the restoration of the unneeded surplus to the public domain, let it be done thoroughly. If reservations have proven to be inadequate for the purposes for which they were designed, have shown themselves a hindrance to the progress of the Indian as well as an obstruction in the pathway of civilization, let the reservations, as speedily as wisdom dictates, be utterly destroyed and entirely swept away.

If we purpose to educate Indian children let us educate all of them. The reasons that determine us to educate the few apply with increasing force to the education of the many. If we look to the schools as one of the chief factors of the great transformation that is being wrought, why not at once establish enough to embrace the entire body of available Indian youth, and thus not only hasten but render doubly sure their good work. "Make haste slowly" does not seem to apply here. There is now a widespread demand for education among the Indians; it has become comparatively easy to secure the attendance of their children, and the work of education has proceeded so far as to establish beyond question the advisability of educating them to self-support, so that there would seem to be no good reason why the system of education that has been, since 1876, gathering force and strength, should not at once be so far extended as to be entirely adequate for the end in view. If this were done, and there could be gathered by the end of 1893 into well-manned and suitably equipped schools nearly all of the Indian children, and they could be kept there for 10 years, the work would be substantially accomplished; for within those 10 years there would grow up a generation of English-speaking Indians, accustomed to the ways of civilized life, and sufficiently intelligent and strong to forever after be the dominant force among them.

(9) *Stability.*—Having determined upon a policy, we should regard it as permanent until its work is accomplished. Whatever laws are to be passed should be framed with reference to the perfecting and not the essential modification of the plan. All acts of administration should be with reference to its success. Agents should be selected, employes appointed, regulations framed, and orders given with a single eye to the speediest and most complete carrying out of the purpose of the Government as formulated. The day of experiment should be ended. Consistency in legislation, uniformity in administration, permanence of the tenure of office based upon intelligent comprehension of the work to be done, and competence and fidelity in the discharge of duty would very materially hasten the successful accomplishment of the wise ends of the Government.

(10) *Time.*—The great forces now at work; land in severalty with its accompanying dissolution of the tribal relation and breaking up of the reservation; the destruction of the agency system; citizenship, and all that belongs thereto of manhood, independence, privilege, and duty; education, which seeks to bring the young Indians into right relationship with the age in which they live, and to put into their hands the tools by which they may gain for themselves food and clothing and build for themselves homes, will, if allowed to continue undisturbed a reasonable

length of time, accomplish their beneficent ends. They should be fostered, strengthened, maintained, and allowed to operate.

Other forces scarcely less powerful than these, namely, the progress of our own civilization, which is invading the reservations and surrounding the Indians on every side, the progress of Christianity through the active missionary efforts of the churches, the changed conditions which have forced upon the Indians themselves the necessity of greater efforts towards self-help and improvement, combine and coöperate with the organized efforts of the Government to bring about their uplifting.

How long it will take for the work to be completed depends partly upon the wisdom of Congress when making necessary laws, partly upon the will of the Executive in making appointments and giving direction to Indian affairs, partly upon the fidelity and intelligence of agents and others chosen to superintend the work, partly upon the vigor and efficiency of the schools and those employed to teach industries, partly upon the zeal of Christian churches and humanitarians, and largely upon the spirit of those of our people who find themselves in face-to-face relationship with Indian families and individuals, on the reservations and elsewhere. It is not safe to prophesy, and in view of the past hundred years it may be unwise to predict, yet I will venture to say that it is possible, before the close of the present century, to carry this matter so far towards its final consummation as to put it beyond the range of anxiety. Not everything can be accomplished within that time, but enough can be done so that the Commissioner who writes the seventieth annual report can speak of the Indian solution instead of the Indian problem.

T. J. MORGAN,
Commissioner.

The SECRETARY OF THE INTERIOR.

REPORT OF THE COMMISSIONER OF PENSIONS.

DEPARTMENT OF THE INTERIOR,
BUREAU OF PENSIONS,
Washington, D. C., September 22, 1891.

SIR: I have the honor to submit herewith a number of tables which set forth in succinct form certain business operations of this Bureau during the fiscal year ended June 30, 1891.

There were on June 30, 1891, 676,160 pensioners borne upon the rolls, being 138,216 more than were carried on the rolls at the close of the last fiscal year, and classified as follows:

Widows and daughters of Revolutionary soldiers.....	23
Army invalid pensioners	413,597
Army widows, minor children, etc.....	108,537
Navy invalid pensioners	5,449
Navy widows, minor children, etc	2,568
Survivors of the war of 1812.....	284
Widows of soldiers of the war of 1812.....	7,590
Survivors of the Mexican war.....	16,379
Widows of soldiers of Mexican war.....	6,076
Act of June 27, 1890:	
Army invalid pensioners	97,136
Army widows, minor children, etc.....	12,209
Navy invalid pensioners	3,976
Navy widows, minor children, etc.....	1,436

During the fiscal year first payments were made upon 131,160 original claims. These claims required \$31,391,538.75 for their payment.

During the year first payments were made upon 64,532 original claims more than the year previous at an aggregate cost of \$1,087,302 less.

There were 222,521 first payments of every description, requiring \$38,552,274.31, being \$69,592 less than was required for the 130,514 first payments made during the last fiscal year.

The average value of first payments made during the fiscal year ended June 30, 1891, was \$239.33, and the average value of first payments on claims allowed under the act of June 27, 1890, was \$71.28. The average value of first payments for the preceding year was \$485.71, being a reduction in the average first payments for the year 1891, as compared with the fiscal year 1890, of \$246.38.

The aggregate annual value of the 676,160 pensions on the roll June 30, 1891, was \$89,247,200.20, and the average annual value of each pension on the roll at the close of the fiscal year was \$131.99, and the average annual value of each pension on the roll under the act of June 27, 1890, was \$121.51.

At the close of the fiscal year there were 38,574 pensioners on the roll who remained unpaid for want of time, and who were entitled to receive \$4,883,242.64, which will be paid out of the appropriation for the fiscal year beginning July 1, 1891; and there remained at the close of the fiscal year in the hands of the several pension agents the sum of \$5,713,852.84 of the pension fund which has not been paid out, and which has been turned into the Treasury. This amount added to \$3,607,133.22 of the pension appropriation not drawn from the Treasury aggregates \$9,320,986.06 of the appropriation which was not expended.

There will be a deficiency in the appropriation for the payment of fees and expenses of examining surgeons of about \$400,000. The amount of the accounts remaining unpaid will be ascertained, and an estimate made for the necessary money to cover the same.

The total amount of money disbursed on account of pensions, expenses, etc., during the fiscal year, was \$118,548,959.71, as compared with \$106,493,890.19 disbursed during the preceding fiscal year; so it appears that 138,216 pensioners were added to the rolls during the fiscal year just closed, at an increased cost to the nation of only \$12,055,069.52, as compared with the expenditures for the previous fiscal year, and said expenditure includes \$4,357,347.30 paid upon vouchers remaining unpaid at the close of the fiscal year June 30, 1890.

Pension certificates were issued during the four fiscal years last past as follows:

1888	113, 173
1889	145, 298
1890	151, 658
1891	250, 565

LAND WARRANTS.

During the past fiscal year there were issued 85 original and duplicate military land warrants for 8,600 acres of land.

CONDUCT OF BUSINESS.

In the conduct of the business for the past year, in addition to the adjudication of completed cases, it has been a prime object to put as many cases as possible in train for completion.

With this end in view 603,641 orders were made for medical examinations, and 474,680 medical certificates of examinations were actually received. Three hundred and forty-five thousand eight hundred and sixty-seven reports from the War Department were received, giving the military and medical history in as many claims, and calls were made in 812,072 cases for evidence to complete them.

The regulations in regard to the required proof in claims filed under the act of June 27, 1890, were drafted with the view of giving plain and accurate information as to what is required to establish a claim, so as to avoid the necessity of constantly giving the status of cases to claimants and their attorneys, who are supposed to keep the run of the evidence forwarded to the Bureau.

It will be understood from the foregoing figures of work done, and the statements in this report of the large receipt of evidence, that there are a great number of claims in the process of early completion.

The rule of the office is to dispose of completed cases at the earliest practical moment. Under this rule cases will be taken up for final action whether the claimant is represented by an attorney or not, if the office is informed that the case is complete. If, however, upon an examination of the claim it appears that calls for evidence made by the office have not been answered, the person making the erroneous statement of the completion of his case will not be allowed to secure an advancement of his claim by reason of the misstatement.

The important thing for every claimant to do is to furnish the evidence required to prove his claim without waiting to be called upon for it by the office. In such cases if a medical examination is necessary to complete the case, all the other evidence being in, an order for such an examination will be issued at once upon application.

WIDOWS AND DAUGHTERS OF THE SOLDIERS OF THE REVOLUTION.

With a feeling of reverence I invite your attention to the list of Revolutionary pensioners, consisting of 20 widows and 3 daughters of soldiers of the Revolution.

These venerable persons represent the dead heroes of that great struggle which established constitutional liberty in America, and their names, with the survivors of the war for the Union, connect the two great events in the history of the Republic: its creation and preservation.

In 1870 there were 727 widows of Revolutionary soldiers on the pension rolls. In a few years more the small remnant remaining will have passed away.

I invite your attention to the annexed tables, which show the length of service and ages of 83,406 pensioners to whom certificates were granted from February 14 to June 30, 1891, inclusive.

The facts upon which these tables are based were taken from the papers in each case and recorded upon statistical cards, and compilation made therefrom. These cards were put in use for the above purpose, and also for the preparation of the daily report of the value of pension certificates issued, on the 14th day of February last. It would have been interesting to have had these figures for the entire year, but the cards were not adopted for this purpose until the above-named date.

It will be observed that of the 12,402 soldiers to whom certificates were issued under the general law, 1,371 were to persons who had served a period of 6 months and under, while 11,031 were to those soldiers who served for a period of 7 months and over, and that the largest

number of certificates issued to soldiers of a particular length of service was 905 to those who served 34 months, and 878 to those who served 36 months. The remarkable fact is disclosed that 50 certificates were issued to men who served from 161 months to 476 months. It also appears that of the 71,004 persons to whom pensions were granted under the act of June 27, 1890, 1,163 certificates were issued to soldiers who served 6 months and under; 26,099 were issued to persons who served 12 months and under, while 44,905 were issued to those who served 13 months and over, and that the largest number of certificates issued to any class was 4,693 to men who served 36 months.

It is a somewhat remarkable and interesting coincidence that the age attached to the greater number of persons pensioned under both the old law and the act of June 27, 1890, was 47 years.

I submit that the data incorporated in these tables shows the fact that the pensions now being granted under the old as well as the new law are not to persons whose terms were short and who saw but little service during the war. The great majority of the certificates now being issued are to veterans of the great struggle for the Union, and many of these men would have gone to their graves in want, but for the just, humane, and timely enactment of the act of June 27, 1890.

Statement showing number of invalid pensions granted under the general law from February 14 to June 30, 1891, inclusive, and period of service, by months, rendered by each pensioner.

Months.	No.	Months.	No.	Months.	No.	Months.	No.
1.....	25	39.....	117	79.....	1	172.....	1
2.....	64	40.....	75	82.....	3	173.....	1
3.....	221	41.....	94	84.....	4	174.....	2
4.....	463	42.....	73	85.....	1	176.....	2
5.....	321	43.....	83	86.....	2	180.....	2
6.....	277	44.....	90	88.....	1	181.....	1
7.....	326	45.....	141	89.....	1	192.....	2
8.....	361	46.....	162	91.....	1	204.....	1
9.....	613	47.....	143	92.....	1	210.....	3
10.....	578	48.....	163	94.....	1	214.....	2
11.....	379	49.....	70	96.....	8	222.....	3
12.....	463	50.....	48	97.....	1	225.....	1
13.....	212	51.....	22	99.....	4	232.....	1
14.....	108	52.....	30	100.....	2	233.....	2
15.....	161	53.....	18	101.....	1	240.....	1
16.....	253	54.....	17	103.....	1	241.....	1
17.....	246	55.....	11	104.....	1	245.....	2
18.....	266	56.....	13	106.....	2	251.....	1
19.....	211	57.....	6	107.....	1	253.....	1
20.....	193	58.....	7	108.....	3	257.....	1
21.....	181	59.....	8	112.....	1	259.....	1
22.....	194	60.....	43	117.....	2	260.....	1
23.....	163	61.....	4	118.....	2	262.....	1
24.....	245	62.....	1	120.....	13	263.....	1
25.....	190	63.....	1	122.....	1	270.....	1
26.....	108	64.....	3	125.....	2	286.....	1
27.....	88	65.....	1	129.....	1	292.....	1
28.....	91	66.....	3	133.....	2	297.....	1
29.....	93	67.....	3	138.....	2	317.....	1
30.....	113	68.....	5	142.....	1	323.....	1
31.....	93	69.....	1	147.....	1	336.....	1
32.....	121	70.....	2	148.....	1	346.....	1
33.....	246	71.....	4	157.....	2	438.....	2
34.....	905	72.....	4	158.....	1	476.....	1
35.....	554	73.....	2	161.....	1		
36.....	878	74.....	1	163.....	1		
37.....	534	75.....	1	166.....	1		
38.....	221	77.....	1	169.....	1		
						Total	12,402

Statement showing number of invalid pensions granted under the general law from February 14 to June 30, 1891, inclusive, and the age of each pensioner in years.

Age.	No.	Age.	No.	Age.	No.	Age.	No.
29.....	3	40.....	11	58.....	343	76.....	12
30.....	2	41.....	80	59.....	351	77.....	12
31.....	6	42.....	78	60.....	375	78.....	12
32.....	6	43.....	284	61.....	308	79.....	19
33.....	6	44.....	438	62.....	318	80.....	19
34.....	4	45.....	643	63.....	330	81.....	11
35.....	4	46.....	831	64.....	220	82.....	10
36.....	4	47.....	846	65.....	178	83.....	3
37.....	11	48.....	837	66.....	188	84.....	2
38.....	7	49.....	803	67.....	74	85.....	1
39.....	8	50.....	102	68.....	69	86.....	3
40.....	6	51.....	750	69.....	77	87.....	1
41.....	6	52.....	558	70.....	73	88.....	1
42.....	6	53.....	648	71.....	68	89.....	1
43.....	6	54.....	551	72.....	31		
44.....	9	55.....	571	73.....	19	Total.....	12,463
45.....	4	56.....	422	74.....	20		
46.....	11	57.....	308	75.....	15		

Statement showing number of individual pensions granted under the act of June 27, 1890, from February 14 to June 30, 1891, inclusive, and the period of service by months rendered by each pensioner.

Months.	No.	Months.	No.	Months.	No.	Months.	No.
3.....	1,638	43.....	316	81.....	5	143.....	3
4.....	3,833	44.....	370	82.....	1	144.....	1
5.....	1,910	45.....	484	83.....	4	145.....	1
6.....	1,798	46.....	661	84.....	4	147.....	1
7.....	1,922	47.....	753	85.....	3	158.....	1
8.....	3,081	48.....	698	86.....	1	159.....	2
9.....	4,174	49.....	748	87.....	2	167.....	1
10.....	3,716	50.....	512	88.....	2	169.....	1
11.....	2,289	51.....	207	89.....	4	163.....	1
12.....	2,778	52.....	206	91.....	1	167.....	2
13.....	1,254	53.....	167	92.....	1	168.....	1
14.....	996	54.....	104	94.....	4	179.....	1
15.....	1,071	55.....	112	95.....	3	181.....	1
16.....	1,468	56.....	77	96.....	12	182.....	2
17.....	1,260	57.....	53	97.....	3	189.....	1
18.....	1,568	58.....	39	98.....	3	192.....	1
19.....	1,378	59.....	29	99.....	1	204.....	1
20.....	1,337	60.....	21	103.....	2	206.....	1
21.....	1,186	61.....	137	104.....	2	208.....	2
22.....	2,507	62.....	38	105.....	1	211.....	1
23.....	1,044	63.....	16	106.....	1	231.....	1
24.....	1,327	64.....	15	107.....	2	234.....	1
25.....	938	65.....	28	108.....	2	232.....	1
26.....	811	66.....	144	109.....	1	260.....	1
27.....	654	67.....	12	111.....	1	263.....	1
28.....	599	68.....	9	114.....	2	265.....	1
29.....	481	69.....	4	115.....	1	266.....	1
30.....	503	70.....	2	116.....	2	273.....	1
31.....	462	71.....	4	118.....	3	276.....	1
32.....	603	72.....	4	119.....	1	277.....	1
33.....	1,266	73.....	25	120.....	4	280.....	1
34.....	3,842	74.....	7	125.....	1	315.....	1
35.....	2,383	75.....	2	130.....	1	318.....	1
36.....	4,693	76.....	5	131.....	2	347.....	1
37.....	2,768	77.....	4	132.....	3	348.....	1
38.....	1,450	78.....	5	133.....	2		
39.....	858	79.....	3	134.....	1	Total.....	71,004
40.....	437	80.....	4	136.....	1		
41.....	315		2	138.....	1		

Statement showing number of invalid pensions granted under the act of June 27, 1890, from February 14 to June 30, 1891, inclusive, and the age of each pensioner in years.

Age.	No.	Age.	No.	Age.	No.	Age.	No.
30.....	2	50.....	3,871	66.....	1,390	82.....	27
31.....	1	51.....	3,557	67.....	959	83.....	30
33.....	1	52.....	3,152	68.....	839	84.....	15
37.....	2	53.....	3,056	69.....	748	85.....	21
38.....	8	54.....	2,801	70.....	687	86.....	16
39.....	15	55.....	2,500	71.....	534	87.....	8
40.....	124	56.....	2,414	72.....	373	88.....	8
41.....	228	57.....	2,373	73.....	311	89.....	12
42.....	607	58.....	2,207	74.....	253	90.....	8
43.....	1,590	59.....	1,005	75.....	232	91.....	4
44.....	2,542	60.....	2,077	76.....	172	92.....	2
45.....	3,637	61.....	1,921	77.....	112	93.....	2
46.....	4,036	62.....	1,891	78.....	81	94.....	2
47.....	4,282	63.....	1,821	79.....	77		
48.....	3,989	64.....	1,692	80.....	56	Total.....	71,004
49.....	3,927	65.....	1,601	81.....	45		

You will observe from table No. 2 that during the past fiscal year 20,525 pensioners were dropped from the rolls for various causes, and that of this number 13,225 were dropped by reason of death; it is highly probable that a number of pensioners have died whose deaths have not yet been reported.

The following table shows the number of pensioners of the various classes with the percentage of deaths per thousand persons. In 1889 the loss to the pension rolls by the decease of widows and dependent mothers and fathers was at the rate of 25 per thousand; in 1890, 33 per thousand, and, in 1891, 35 per thousand.

I invite your attention to this great death rate in this most deserving class of pensioners.

It is estimated that, of the soldiers who served the country during the late war, 1,004,658 were killed in battle or died during and since the war. On the 30th of June last, 124,750 of these deceased soldiers were represented on the pension rolls by their widows or other dependents.

There are about 1,208,707 soldiers of the Union now living, and of these survivors 520,158 are now on the pension rolls. There are, therefore, 688,549 survivors who are not pensioned and 879,908 deceased soldiers not represented on the pension rolls.

PERCENTAGES OF MORTALITY.

The following table shows the percentages of mortality for each class of pensioners for the year ended June 30, 1891.

Classes.	Pensioners on the pension roll at the end of the year.	Number of pensioners who died during the year.	Average death rate for each 1,000 pensioners on the pension roll on June 30, 1891.
General law, Army and Navy:			
Invalids.....	419,046	7,113	17
Widows, etc.....	111,128	3,900	35
Act of June 27, 1890,* Army and Navy:			
Invalids.....	101,112	430	14
Widows, etc.....	13,644	103	29
War of 1812:			
Survivors.....	284	112	400
Widows.....	7,590	789	104
War with Mexico:			
Survivors.....	16,379	690	42
Widows.....	9,976	95	13
Total.....	676,160	13,229	

* The cases allowed under this act cover an average period of three and one-fourth months. The actual death rate of the "invalid" pensioners was 4 per 1,000, or an average annual death rate of 14 per 1,000, while that of the "widows, etc." was 8 per 1,000, or an average annual death rate of 29 per 1,000.

ADJUDICATION OF THE CLAIMS OF WIDOWS AND OTHER DEPENDENTS.

During the months of July and August a large proportion of the force of the Bureau were placed upon the work of examining the claims of widows and other dependents of deceased soldiers. It is believed that these worthy claimants merit a special effort on the part of the office to bring their claims to early settlement.

WORK OF THE ARMY AND NAVY SURVIVORS' DIVISION.

I invite your attention to table No. 20 of the work for the year of the Army and Navy Survivors' Division. Among other items of interest will be found the statement that 155,930 names with post-office addresses were furnished to claimants in 26,210 cases, thus rendering valuable assistance to them in their search for evidence.

WORK OF THE MAIL DIVISION.

Your attention is particularly invited to table No. 21, showing the work of the Mail Division of the Bureau of Pensions.

No table in this report more fully illustrates and emphasizes the magnitude of the work of this Bureau. It will be seen that during the fiscal year the Bureau received 154,817 communications from members of Congress; that 1,170,660 letters of inquiry in regard to pension claims were received from claimants and their attorneys and friends; that 5,375,120 pieces of mail matter were received during the year, and that 3,926,491 letters, circulars, and cards were sent out from the Bureau.

Prior to October, 1889, the practice of the Bureau was to send letters of inquiry from claimants to the cases without acknowledgment. Now it is a rule of the office that the chief of the mail division shall cause an acknowledgment of all letters to be sent to the writers, after which such communications are forwarded to the claims to which they relate.

There was an average of more than 3,800 letters of inquiry received per day. It was a physical impossibility to draw from the files and examine the claims to which these letters related and to give the writers of such letters a definite answer as to the condition of these claims. To have answered these letters intelligently after an examination of the claims would have been such a herculean task that the adjudication and allowance of claims would have ceased. The Commissioner was left to the necessity of simply forwarding acknowledgments to the writers of such letters, with a statement that the claims to which they related would receive attention when reached in their order.

A class of letters was received, however, of such a character as forbade delay. These letters were from all classes of claimants, setting forth with great earnestness and particularity statements of their ill health and destitution.

For the purpose of giving proper attention to these letters, a section was organized in the Mail Division in November, 1890, with an assistant chief and a suitable number of clerks. As a result of this arrangement, 26,091 letters were answered direct by this section, 3,029 were brought to the special attention of the Commissioner, 4,580 were referred to the law division and the cases to which they related placed upon the list of "completed files," and 31,587 were referred to the proper adjudicating division for reply.

The labors of this section have been beneficial to many claimants by causing their claims to be brought to a more speedy settlement.

INSTRUCTIONS BY THE COMMISSIONER TO THE MAIL DIVISION FOR
THE CONSIDERATION OF URGENT LETTERS.

1st. Where a claimant alleges the necessary facts to bring his claim substantially within the provisions of Order No. 151, send the letter to the law division for case to be placed on the completed files.

2d. Where a claimant states his condition to be such as would, if shown by affidavits, authorize it to be made special, send him circular No. 3-052, with the information that if he furnishes the proofs his claim will be made special.

3d. Where the claimant complains of delay but does not bring his case under Order No. 151, send him a copy of that order, and inform him that if he completes his case and gives notice under that order, it will be placed upon the completed files and be taken up promptly in its turn.

4th. If a claimant shows by his letter that the evidence is all in, but that he has not been examined, send the letter to the chief of the proper division, who will examine the papers and order the examination, if it is proper to do so.

5th. If a claimant alleges financial distress, but does not state that his claim is complete, send him Order No. 151, and inform him that if he completes his case at once, and gives notice under said order, his claim will be placed on the completed files and taken up and disposed of promptly.

6th. If a claimant alleges that his claim is in the completed files, or if he inquires what further evidence is needed to complete the claim, and also alleges destitution, the letter should be referred to the chief of the proper adjudicating division, who will see that proper action is taken and the claimant advised.

All letters acted upon under this order shall be properly indorsed in the mail division.

CORRESPONDENCE WITH MEMBERS OF CONGRESS.

I regret to say that the correspondence of the Bureau of Pensions with members of Congress in regard to the status of pension claims has not been kept current, as is desirable, because of the immense number of requests made by Senators and members for the condition of claims. As stated above, there were 154,817 Congressional calls for the condition of cases made during the past fiscal year, being an average of more than 500 per day.

It is desirable from every point of view that the greatest courtesy shall be extended by executive officers to members of the law-making power in matters pertaining to executive business. Members of Congress correspond with the Bureau of Pensions in regard to claims pending therein with a view of having such claims brought to a speedy adjudication, but the number of their applications for "status" has been so great that if the claims to which they related had been drawn from the files and a proper statement of the status given from day to day as received, it would have occupied so much of the time of the examiners that it would have seriously interfered with the adjudication of claims, and would have resulted in a denial of justice to thousands of claimants to whom certificates have been issued.

STATEMENT OF NUMBER OF CLAIMS PENDING JULY 1, 1891.

On the 1st day of July an examination and count of all claims pending in the office was made with a view of correcting any errors which may have crept into the records, which have heretofore been based upon the reports of the record division. As a result of this examination a great many duplicate claims of various kinds were found, and these have been eliminated from the count.

The following table gives an accurate statement of claims pending in the office at the date above mentioned, and from which it will be seen that while there were 928,473 claims pending, 559,027 were claims of persons who were not on the pension rolls. The remaining 369,446 were claims for increase of pension and duplicate claims under different laws.

Statement of claims pending.

Old war service prior to 1861.....	4,125
Service subsequent to March 4, 1861:	
Original invalid.....	153,201
Original widows'.....	87,855
	<hr/> 241,056
Act June 27, 1890:	
Original invalid.....	207,475
Original widows'.....	70,128
	<hr/> 277,603
Additional claims to others, on file, but not pensioned:	
Original invalid, rejected files.....	23,875
Original widows', rejected files.....	7,303
Widows formerly pensioned, but dropped from the rolls.....	5,065
	<hr/> 36,243
Number of claimants not on rolls.....	559,027
Number of persons pensioned under the old laws who have increase claims pending.....	194,299
Number of persons on rolls under old laws who have claims pending under act of June 27, 1890.....	74,697
Number of claims of widows, etc., for accrued pension of deceased pensioners.....	6,812
Duplicate claims under act of June 27, 1890, with old law claims on file.....	93,638
Total.....	928,473
Of the above pending claims the number filed under the act of June 27, 1890, is.....	482,181
There are also in the files of the Pension Office rejected claims to the number of.....	146,536

ORDERS FOR MEDICAL EXAMINATION.

It will be seen from the report of the medical referee that during the fiscal year 603,641 orders were issued for the medical examination of claimants and that 474,680 certificates of medical examinations were received.

CALLS UPON WAR DEPARTMENT.

There were received during the fiscal year 345,867 reports from the War Department, giving the military and medical history of pension claimants.

* * * * *

RECORD DIVISION.

For some months after the passage of the act of June 27, 1890, the record division was overwhelmed by the great mass of applications which poured in under that act. The force of the division was in-

creased by details from other divisions to 338 persons, but it was beyond the power of even this number of clerks to take up and dispose of the applications as they came in. This work, however, was pushed with great energy, and all applications were examined, recorded, numbered, jacketed, and sent to the proper adjudicating divisions for action. The force has been reduced to 154 persons, and now all applications for pension and all evidence and other papers relating to cases sent to the record division for action are immediately disposed of, and the proper record entries of pension certificates issued from day to day are also made by this division without delay.

* * * * *

SPECIAL EXAMINATION DIVISION.

I am glad to be able to state that the work in the special examination division is now thoroughly well in hand. Two years ago more than 14,000 claims were in the hands of that division. An earnest effort has been made to dispose of the accumulated work of this division, and, as a result, during the past two years 56,146 claims have been examined and reported upon. There were on the 1st of July 2,270 claims in the hands of special examiners in the field for examination.

The reduction of this work has made it necessary to reduce the force of special examiners assigned to duty in the field. Last October there were 340 persons assigned to this work; there are now 110 employés so assigned.

The reduction of this force has been an unpleasant feature of administration, as a great majority of persons assigned to duty as special examiners preferred to remain in the field because of the \$3. per diem attached to this service and their greater freedom of action than when confined to desk work at the Pension Office.

The amount expended for this service during the fiscal year just ended was \$347,599.80. The appropriation for the next fiscal year is \$215,000, which will be amply sufficient for the service.

Under the present method of procedure, claims placed in the hands of special examiners are investigated and reported upon with the utmost dispatch, to the great benefit of claimants appearing before the Bureau whose claims require special investigation.

* * * * *

ARMY AND NAVY SURVIVORS' DIVISION.

I invite your attention to the report of the chief of the army and navy survivor's division. The work of this division is extensive and of great benefit to the claimants appearing before the Bureau, for where claimants are unable to furnish the proof necessary to establish their claim under the law by reason of their inability to locate the officers and comrades with whom they served, the examiners have recourse to the files of this division, from which a list of names and post-office addresses of comrades is obtained and forwarded to the claimants, thus materially assisting them in the prosecution of their claims to a successful issue.

ADJUDICATING DIVISIONS.

There are eight great divisions engaged in the work of the adjudication and settlement of pension claims and the issuing of certificates in pension cases.

The five adjudicating divisions proper, composed of the old war and navy division, with a force of 79; eastern division, with a force of 180; the middle division, with a force of 187; the western division, with a force of 200; and the southern division, with a force of 154—being a total force of 779—have the custody of the 928,473 pension claims pending in the Bureau. Such work as can be current in these divisions is now performed without delay. That is, all new applications for pension and all applications for increase of pension, all new evidence in cases, and letters and reports of medical examinations relating to pension claims are immediately placed in the files where they properly belong from day to day, without allowing them to accumulate.

The other work of the divisions (that is, the adjudication of claims, calls upon the War Department for the military and medical history of claimants, calls upon claimants for evidence to complete their cases, and orders for medical examination) is performed in the order in which the cases are reached, the object being at all times to give attention to each claim in its turn under the rules.

* * * * *

PENSION AGENCIES.

There are 18 pension agencies, eleven of which are located in Government buildings and seven in rented quarters. The quarters occupied by the Chicago and Topeka agencies in the public buildings are totally inadequate for the convenient transaction of the public business. Each of these agencies should have at least twice as much room as they now occupy. The Chicago agency may be relieved when the new appraisers' building is finished by the removal of a number of the force connected with the customs service to that building and the assignment of additional quarters to the pension agency.

There seems to be no means of relieving the Topeka agency by the assignment of additional quarters in the Government building in that city. A proposition has recently been submitted by Hon. S. J. Crawford for the use, by the pension agency, of a part of the new building erected by him in Topeka, and his proposition is, in my opinion, worthy of earnest consideration. For the continued use of the building it would be necessary for an appropriation for rent. The rent proposed is \$2,500 per annum.

The following named agencies are in private quarters, and the rent charged each is shown below:

Washington, D. C.	\$1,380
Detroit	1,980
Milwaukee	2,218
Indianapolis	2,500
Pittsburg	2,200
New York	6,500
San Francisco	1,272
Total.....	\$18,050

The pension agent at Pittsburg has recently secured new and more commodious quarters, which will probably be occupied by him until the completion of the public building at that city. In the case of the agency in the city of New York, it is highly improbable that the present quarters (the old Dime Savings Bank of New York City) can be retained without an increased rent to \$10,000 per annum.

It is proper to state that the business of the pension agencies is conducted in the most satisfactory manner, the disbursements being made with extraordinary dispatch. The employes on duty at the several pension agencies work more hours each day and receive smaller salaries than the clerks of the various bureaus in Washington employed at similar work. As these agencies are a part of the permanent establishment for the conduct of the pension business, there seems to be no reason why their salaries should not be equal to other employes of the Government engaged upon the same class of work.

I extend the thanks of the bureau to the pension agents and their official force for the very satisfactory and able manner in which they have transacted public business during the past year.

EXAMINING SURGEONS.

In the establishment of the boards of examining surgeons throughout the country for the medical examination of claimants, it is a rule of the bureau that the appointees must be graduates of some reputable school of medicine, and have had at least five years' practice. It is believed that these boards are composed of gentlemen of good professional ability and standing in the respective communities where they reside, and for the most part their services in the examination of claimants have been entirely satisfactory to the Bureau.

In the selection of specialists for the examination of particular classes of disabilities, the aim has been to secure the services of physicians and surgeons of the highest skill and standing.

* * * * *

AGGREGATE FORCE UNDER THE SUPERVISION OF THE COMMISSIONER OF PENSIONS.

There are now 1,135 examining boards and 335 single surgeons located in various parts of the country, aggregating 3,800 physicians engaged in the great work of the medical examination of applicants for pension.

The clerical force proper is composed of 2,009 persons, and there are 18 pension agencies furnishing employment to 419 employes, making a total number of 6,246 officers and employes of the Bureau of Pensions.

SPECIAL CASES.

During the fiscal year just ended 5,608 applicants for pension brought their cases within the operation of Departmental Circular No. 3-052, under the provisions of which claims are made "special." Of this number 211 were claims of Oklahoma soldiers, expedited by your order.

The grounds upon which a claim may be made special are set forth in said circular as follows:

To justify the Commissioner in making a claim special, it is necessary that such a condition of the claimant shall be shown to exist as will satisfy those whose claims will be put back by this action.

The rule is therefore adopted that, to warrant making a claim special and have it considered out of its proper order, it must be shown that the claimant is unable to earn a living and is in destitute circumstances or that the claimant is sick and in danger of immediate death.

These statements must be verified by the oath of the claimant making them or of some reputable party acting for him.

DIFFERENCE BETWEEN THE ACTS OF MARCH 3, 1883, AND MARCH 4, 1890.

I respectfully call attention to the following recommendation contained in the annual report of last year, and have the honor to renew the same:

I respectfully invite your attention to the great difference in amount between the rate of \$30 per month granted by the act of March 3, 1883, to pensioners who are so disabled as to be incapacitated for performing any manual labor, and the rate of \$72 per month granted by the act of March 4, 1890, to pensioners who require the regular aid and attendance of another person. There are many claimants who are entirely incapacitated for performing manual labor and who periodically require the aid and attendance of other persons, but who are unable to establish the fact of the requirement of constant aid and attendance.

It occurs to me that it would be a just provision to create a higher rate than \$30 per month for cases of this description, and I respectfully recommend that a rate of \$50 per month be created for them.

The experience of the office makes it more and more apparent that there should be a rate between that of \$30 per month and \$72 per month for a class of pensioners who are less seriously disabled than those entitled to the higher rating, but who seem, in justice, to be entitled to more than \$30 per month.

ESTIMATE OF WORK FOR ENSUING FISCAL YEAR.

I desire to call your attention to the reports made to the Department during the past few months, showing the number of pension certificates issued, average amount of first payments, and of the monthly rates. The average of issues is now about 30,000 certificates per month. I am satisfied that the Bureau will be able to carefully adjudicate and allow 350,000 claims for pension during the present fiscal year, and after a careful estimate of the probable cost of these issues I have no hesitation in saying that, in my opinion, the present appropriation of \$133,473,085 will be amply sufficient.

REIMBURSEMENT FOR THE CARE OF INSANE PENSIONERS.

I call attention, with approval, to the recommendation of Deputy Commissioner Lincoln in his report for additional legislation for the protection of the interests of the Government in respect to the expenditures made for the care of disabled soldiers in the Government Hospital for the Insane. There is no well-defined authority for the reimbursement of the Government for such expenditures out of pensions which may be allowed to the insane person after years of care at the Government expense.

* * * * *

CONCLUSION.

The Bureau of Pensions is thoroughly organized for the performance of its great work. The divisions are well balanced in respect to the work to be performed by each, and their chiefs are gentlemen of excellent ability and are conscientiously devoted to their duties. The clerical force is composed of men and women of intelligence and capacity, and during the past year there has been exhibited an excellent spirit which can not be too highly commended. An immense amount of work has been done, well done, and cheerfully done. I extend to them my hearty thanks.

It affords me pleasure to be able to state that I have received the

cordial advice and support of your Department in all efforts for the improvement of the organization of this Bureau and the prompt settlement of pending claims, for which I extend my sincere thanks.

I am warmly grateful to the deputy commissioners, medical referee, and heads of divisions for their valuable advice and earnest labors in bringing the Pension Office to its present high state of efficiency. I also particularly thank those who have performed their duties under my immediate direction.

Very respectfully,

GREEN B. RAUM,
Commissioner.

Hon. JOHN W. NOBLE,
Secretary of the Interior.

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TABLE No. 2.—Number of pensioners of the various classes dropped from the rolls during the year, with the cause, and the number of each class on the rolls June 30, 1891.

Classes.	By death.	By remar- riage.	Minors by legal limitation.	By failure to claim.	For other causes.	Total number of pensioners dropped from rolls.	Total number of pensioners of all classes on the rolls June 30, 1891.
<i>General law.</i>							
Army and navy.....	7,113 3,900	1,421	1,433	701 793	617 334	8,491 7,880	419,046 111,128
Total.....	11,013	1,421	1,433	1,533	951	16,371	530,174
<i>Classification of widows' roll under general law:</i>							
Widows without children.....	1,264	462		290	127	2,143	56,119
Widows with children.....	330	937		21	139	1,437	17,899
Minor children.....	17		1,433		13	1,463	2,873
Mothers.....	1,684	23		344	48	2,099	27,799
Fathers.....	604			133	7	743	6,380
Brothers and sisters, dependent sons and daughters.....	1			5		6	88
<i>Act of June 27, 1890.</i>							
Army and navy.....	430 103				1,047 34	1,477 153	101,112 13,645
Total.....	533	13	3		1,081	1,630	114,757
<i>Classification of widows' roll, act of June 27, 1890:</i>							
Widows without children.....	68	7			5	80	8,260
Widows with children.....	3	5			7	15	3,866
Minor children.....	1		3			4	106
Mothers.....	24	1			22	47	897
Fathers.....	7					7	515
Helpless children.....							1
<i>War of 1812.</i>							
Survivors.....	112			12	9	133	284
Widows.....	789	2		284	26	1,101	7,590
Total.....	901	2		296	35	1,234	7,874
<i>War with Mexico.</i>							
Survivors.....	690			93	332	1,115	16,379
Widows.....	92	6		96	47	1,175	6,976
Total.....	782	6		123	379	1,290	23,355
Grand total.....	13,229	1,442	1,436	1,972	2,446	20,535	676,160

Total children on the rolls: General law, 80,891; act of June 27, 1890, 7,654.

This table does not include the cases which during the year were dropped from the roll under the general law and pensioned under the act of June 27, 1890, as "additional" cases.

TABLE NO. 3.—*Showing the appropriations for pensions, etc., and the disbursements on account thereof, for the fiscal year 1891, and unexpended balances at the close of the year.*

	Appropriations.				Disbursements.			Balances.			
	Balance arrears fund in the hands of U. S. pension agents June 30, 1890.	Available balance arrears fund July 1, 1890.	Amount appropriated, act June 30, 1890.	Amount deficiency appropriation and adjusting quarterly pension payments, act Mar. 3, 1891.	Total amount appropriated for fiscal year 1891.	Amount disbursed by U. S. pension agents.	Amount disbursed by Treasury settlement.	Total amount disbursed.	Balance remaining in the hands of the U. S. pension agents June 30, 1891.	Balance remaining in the U. S. Treasury June 30, 1891.	Available balance June 30, 1891.
Army pensions.....			\$94,500.76	\$28,678.332.89	\$123,200,000.00	\$114,637,786.25	\$98,219.18	\$114,736,005.45	\$5,333,177.13	\$3,205,461.45	\$88,538.68
Navy pensions.....			2,500,000		2,500,000.00	2,221,917.16	2,039.67	2,224,856.83	178,841.38	96,678.73	276,420.11
Army arrears of pensions.....						12,229.54	5,234.25	17,463.79	169,610.30	231,288.58	400,898.88
Navy arrears of pensions.....						846.67		846.67		71,251.39	71,251.39
Army fees of examining surgeons.....			963,000	500,000.00	1,463,000.00	1,148,947.73		1,148,947.73	1,048.04	546.11	1,594.15
Navy fees of examining surgeons.....			37,000		37,000.00	33,730.99		33,730.99	3,159.16	100.85	3,260.01
Salary.....			72,000		72,000.00	71,999.99		71,999.99	144.45	177.77	222.22
Clerk hire.....			250,000	35,000.00	285,000.00	270,720.67		270,720.67	14,279.09	24	14,279.83
Rent.....			18,200		18,200.00	17,432.33		17,432.33	42.30	767.67	767.67
Fuel.....			750		750.00	152.75		152.75	42.30	554.95	597.25
Light.....			750		750.00	285.77		285.77	404.23	404.23	404.23
Contingent expenses.....			25,000		25,000.00	16,978.43	6,739.13	23,717.56	1,281.86	1,282.44	
Adjusting quarterly pension payments.....				15,000.00	15,000.00	2,790.20		2,790.20	12,202.80		12,202.80
Total.....	129,214.50	363,479.81	58,457.401	29,228,332.89	127,685,793.89	118,435,827.43	113,132.23	118,548,969.71	5,713,862.84	3,607,132.22	9,820,065.06

In addition to the above, there were disbursed during the fiscal year ending June 30, 1891, the following sums, chargeable to the appropriations for the fiscal year ending June 30, 1890:

Fees of examining surgeons, Army pensions.....	\$442,346.03	Total amount paid for pensions.....	\$110,979,172.72
Fees of examining surgeons, Navy pensions.....	5,352.73	Total amount paid for expenses.....	1,599,780.90
Total.....	447,738.76	Total.....	118,648,959.71
Cost of disbursement of pension funds, 1½ per cent.	.....	.....	.....

TABLE NO. 4.—Amount disbursed at United States pension agencies during the fiscal year ending June 30, 1891, as shown by accounts current.

Agencies.	Army pensions.								
	Pensions.	Fees of examining surgeons.	Salary.	Clerk hire.	Rent.	Fuel.	Lights.	Contingent expenses.	Total.
Angusta.....	\$2,810,832.52	.....	\$4,000.00	\$5,105.00	\$224.17	\$45.05	\$9.50	\$500.42	\$2,820,716.76
Boston.....	5,846,673.58	.....	4,000.00	14,734.94	.....	.....	.....	321.38	5,865,129.90
Buffalo.....	6,419,978.52	.....	4,000.00	14,015.98	.....	.....	.....	463.80	6,438,398.30
Chicago.....	8,967,990.24	.....	4,000.00	24,439.54	.....	.....	.....	832.01	8,997,341.89
Columbus.....	13,079,711.28	.....	4,000.00	27,895.10	.....	.....	.....	1,590.94	13,083,198.32
Concord.....	2,977,053.26	.....	3,992.99	6,533.29	.....	.....	.....	296.39	2,987,792.97
Des Moines.....	6,868,819.55	.....	4,000.00	14,154.24	.....	.....	.....	777.96	6,887,751.85
Detroit.....	6,125,874.81	.....	4,000.00	12,035.50	1,955.00	.....	7.60	981.04	6,144,883.95
Indianapolis.....	10,596,708.10	.....	4,000.00	26,257.37	2,052.50	.....	250.80	1,861.05	10,631,199.83
Knoxville.....	5,464,464.36	.....	4,000.00	12,760.21	.....	.....	.....	421.08	5,481,646.15
Louisville.....	4,014,505.84	.....	4,000.00	6,440.51	.....	.....	.....	279.17	4,025,315.53
Milwaukee.....	5,946,832.14	.....	4,000.00	13,871.75	2,218.00	.....	.....	827.31	5,967,750.20
New York.....	5,249,547.37	.....	4,000.00	17,340.06	6,500.00	.....	.....	2,025.00	5,279,412.43
Philadelphia.....	5,688,048.18	.....	4,000.00	17,965.84	.....	.....	.....	1,010.91	5,710,064.93
Pittsburg.....	5,085,769.56	.....	4,000.00	14,353.23	2,000.00	.....	.....	1,596.56	5,107,719.35
San Francisco.....	1,517,075.60	.....	4,000.00	4,170.61	1,222.63	.....	.....	866.18	1,527,335.05
Topeka.....	10,709,227.18	.....	4,000.00	18,405.46	.....	.....	.....	898.13	10,732,630.77
Washington.....	7,369,092.52	\$1,148,947.73	4,000.00	20,280.94	1,220.00	107.70	47.77	1,519.10	8,545,215.76
Total.....	114,637,786.25	1,148,947.73	71,999.99	270,720.67	17,432.33	152.75	285.77	16,978.43	116,164,303.92

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TABLE NO. 4.—Amounts disbursed at United States pension agencies during fiscal year

Agencies.	Navy pensions.		
	Pensions.	Fees of examining surgeons.	Total.
Augusta.....	\$580,543.70	\$692.66	\$692.66
Boston.....	.....	562.07	1,402.74
Buffalo.....	.....	1,990.83	1,990.83
Chicago.....	459,029.67	212.13	212.13
Columbus.....	.....	1,068.80	1,068.80
Concord.....	.....	1,135.00	135.00
Des Moines.....	.....	.....	.....
Detroit.....	.....	624.06	624.06
Indianapolis.....	.....	932.00	932.00
Knoxville.....	.....	850.67	850.67
Louisville.....	.....	2,272.61	2,272.61
Milwaukee.....	.....	137.44	137.44
New York.....	368,156.13	368,156.13	368,156.13
Philadelphia.....	324,799.00	722.27	722.27
Pittsburg.....	.....	1,498.20	1,498.20
San Francisco.....	51,600.34	.....	.....
Savannah.....	.....	179.13	179.13
Washington.....	437,758.32	24.67	24.67
Total.....	2,221,917.10	33,739.99	2,255,657.15

In addition to the above, there were disbursed during the fiscal year ending June 30, 1891, the following sums chargeable to the appropriations for the fiscal year ending June 30, 1890:

Fees of examining surgeons, Army pensions	\$42,346.03
Fees of examining surgeons, Navy pensions	5,352.73
Total	47,728.76

TABLE No. 5.—Statement of amount paid for pensions under the general law.

Agency.	Army pensions.			Navy pensions.			Grand total.
	Invalids.	Widows and others.	Total.	Invalids.	Widows and others.	Total.	
Augusta.....	\$1,913,101.78	\$744,341.66	\$2,657,443.44	.....	.....	.....	\$2,657,443.44
Boston.....	2,305,465.83	2,120,738.14	5,426,204.02	.....	.....	.....	5,426,204.02
Buffalo.....	4,123,970.20	1,897,134.25	6,021,104.45	.....	.....	.....	6,021,104.45
Chicago.....	6,081,331.20	2,913,127.38	8,994,458.58	.....	.....	.....	8,994,458.58
Columbus.....	8,592,773.22	3,244,113.49	11,836,886.71	.....	.....	.....	11,836,886.71
Concord.....	2,037,846.07	750,303.79	2,788,149.86	.....	.....	.....	2,788,149.86
Des Moines.....	5,140,568.60	1,107,893.69	6,248,462.29	.....	.....	.....	6,248,462.29
Detroit.....	4,534,004.07	1,131,593.18	5,665,597.25	.....	.....	.....	5,665,597.25
Indianapolis.....	7,582,258.71	2,430,111.31	10,012,370.02	.....	.....	.....	10,012,370.02
Knoxville.....	2,632,837.60	1,471,837.34	4,104,674.94	.....	.....	.....	4,104,674.94
Madison.....	2,356,837.60	1,153,350.23	3,510,187.83	.....	.....	.....	3,510,187.83
Minneapolis.....	4,479,101.21	1,130,428.36	5,609,529.57	.....	.....	.....	5,609,529.57
New York City.....	9,987,177.06	1,770,898.93	11,758,075.99	.....	.....	.....	11,758,075.99
Philadelphia.....	5,336,647.00	1,654,178.47	6,990,825.46	.....	.....	.....	6,990,825.46
Pittsburg.....	6,370,558.70	1,158,931.71	7,529,490.41	.....	.....	.....	7,529,490.41
San Francisco.....	6,929,260.60	231,917.97	7,161,178.57	.....	.....	.....	7,161,178.57
Tampa.....	7,068,950.03	2,174,322.03	9,243,272.06	.....	.....	.....	9,243,272.06
Washington.....	4,791,550.90	1,367,605.31	6,159,156.21	.....	.....	.....	6,159,156.21
Total.....	75,149,191.68	27,663,620.14	102,812,811.82	1,100,525.55	652,510.95	1,759,036.50	104,571,848.32

TABLE NO. 6.—Statement of amount paid for

1874

Agency.	Army pensions.			Total.				
	Invalids.	Widows and others.	Total.					
Augusta	\$80,771.10	\$13,980.66	\$74,751.76					
Boston	246,624.19	72,941.08	319,565.27					
Buffalo	354,226.32	50,424.36	384,650.68					
Chicago	408,370.33	63,736.77	472,107.10					
Columbus	944,362.38	120,354.13	1,064,716.51					
Concord	88,382.50	13,616.81	101,999.31					
Des Moines	470,207.78	44,136.14	514,343.92					
Detroit	363,316.20	33,308.90	396,625.10					
Indianapolis	371,868.67	55,223.79	427,092.46					
Knoxville	414,737.65	41,851.90	456,589.55					
Louisville	309,444.06	31,843.41	341,287.47					
Milwaukee	254,026.85	26,712.99	280,739.84					
New York City	275,680.30	73,579.06	349,259.36					
Philadelphia	490,772.26	96,568.13	587,340.39					
Pittsburg	474,650.76	51,000.79	525,651.55					
San Francisco	74,030.80	7,304.10	81,334.90					
Topeka	1,045,241.63	89,896.34	1,135,137.97					
Washington	845,213.04	73,329.33	918,542.37					
Total	7,471,926.82	972,829.29	8,444,756.11					

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10,494.37 98,760.49

570,876.59
1,064,716.51
101,999.31
514,343.92
396,625.10
427,092.46
456,589.55
341,287.47
280,739.84
437,203.49
603,106.83
525,651.55
90,532.71
1,145,137.97
1,016,325.74

28,968.69 87,943.53
34,848.05 74,776.44
1,675.23 9,217.81
17,317.54 97,781.37

122,694.83 462,880.66

8,444,756.11 8,907,636.77

TABLE 7.—Number and amount of first payments on each class of certificates made during fiscal year 1891, by pension agents to each class of pensioners.

Class of cases.	Original.		Increase and additional.		Reissue.		Restoration and renewal.		Number and total amount of first payments during year.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
Army—General law.	42,094	\$14,253,606.74	67,383	\$1,945,396.26	10,487	\$3,715,615.82	1,596	\$789,654.85	121,570	\$20,704,273.67
{ Invalids.....	12,721	11,170,041.10	52	8,368.57	147	80,891.77	104	75,989.13	13,024	11,344,290.57
{ Widows, etc.....	608	260,504.62	537	21,331.27	124	37,424.63	33	14,972.71	1,392	11,334,293.23
Navy—General law.	242	187,072.45	16	782.25	7	146.74	6	2,356.16	271	190,337.60
Army—Act June 27, 1890.	61,119	4,399,830.75	10,173	529,014.44	2	72.87	257	19,324.33	71,551	4,948,242.39
{ Invalids.....	9,050	626,048.06							9,054	620,474.36
{ Widows, etc.....	3,110	215,993.20							3,484	231,882.42
Navy—Act June 27, 1890.	1,286	79,388.39	361	14,978.43			13	860.79	1,286	79,388.39
{ Invalids.....										
{ Widows, etc.....										
War of 1812.	3	1,591.67	1	38.40					4	1,633.07
{ Survivors.....	82	62,269.91	4	249.66			3	781.47	89	63,301.04
{ Widows.....	337	64,811.98	27	683.98	9	982.00	1	49.87	374	66,477.83
War with Mexico.	418	67,316.88	1	33	1	238.67	2	149.86	422	67,705.74
{ Survivors.....										
{ Widows.....										
Total.	131,160	31,891,538.75	78,555	2,520,823.59	10,787	3,835,342.50	2,019	994,560.47	222,621	38,682,274.31

Amount paid as fees to attorneys during the year, \$2,769,200.70; average value of original payments made during 1891, \$239.33; average value of original payments in act June 27, 1890, cases made during 1891, \$71.28.

TABLE 8.—Number of cases of each class on hand at the pension agencies and unpaid June 30, 1891, with the amount of the first payment thereon.

Class of cases.	Original.		Increase and additional.		Release.		Restoration and renewal.		Total number of certificates unpaid and the amount due thereon June 30, 1891.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
Army—General law.....	2,492	\$776,980.91	2,341	\$127,679.86	287	\$185,064.70	106	\$87,172.10	6,528	\$1,166,897.57
Widows, etc.....	2,686	691,580.00	1	781.07	6	8,448.99	12	7,881.21	708	612,060.08
Invalids.....	67	7,207.76	84	2,377.16	11	4,350.34	2	624.26	164	14,688.32
Navy—General law.....	23	16,021.96							23	16,021.96
Widows, etc.....	23,928	2,439,280.32	2,979	231,768.20			180	12,840.60	27,057	2,684,897.62
Army—Act June 27, 1890.....	3,287	301,746.60	5	2,366.00			13	1,182.23	3,305	362,890.33
Widows, etc.....	3,454	32,220.38	44				1	64.20	499	24,611.68
Navy—Act June 27, 1890.....	163	12,317.79							153	12,317.79
Widows, etc.....										
Survivors.....										
War of 1812.....	12	7,134.28							12	7,134.28
Widows.....	78	18,613.74							83	19,197.48
War with Mexico.....	48	11,065.53			1	39.47	3	604.37	48	11,065.53
Widows.....										
Total.....	31,228	4,224,178.27	6,484	374,919.26	685	202,913.31	287	81,231.77	33,574	4,882,242.64

Average value of original payments due but not made June 30, 1891, \$135.26; average amount of first payment in original (not June 27, 1890) cases due but not made June 30, 1891, \$100.12.

TABLE No. 9.—Statement of amounts paid for pensions to the survivors of the war of 1812, and to the widows of those who served in that war, since 1871; and to the survivors of the war with Mexico, and to the widows of those who served in that war, since 1887.

Fiscal year of—	War of 1812.			War with Mexico.		
	Survivors.	Widows.	Total disbursements.	Survivors.	Widows.	Total disbursements.
1871 (from Feb. 14 1871).	\$2,555.05	\$511.00	\$3,066.05	.....	.....	.....
1872.....	1,977,415.84	335,083.03	2,312,498.87	.....	.....	.....
1873.....	2,078,666.98	686,363.59	2,765,030.57	.....	.....	.....
1874.....	1,588,832.95	616,026.40	2,204,859.35	.....	.....	.....
1875.....	1,356,599.86	533,000.21	1,889,600.07	.....	.....	.....
1876.....	1,089,037.18	445,772.05	1,534,810.13	.....	.....	.....
1877.....	934,657.82	361,548.01	1,296,205.73	.....	.....	.....
1878 (from Mar. 3, 1878).	768,918.47	294,572.05	1,063,490.52	.....	.....	.....
1879.....	1,014,525.66	2,192,690.54	3,207,225.20	.....	.....	.....
1880.....	790,710.39	2,658,056.14	3,448,766.53	.....	.....	.....
1881.....	621,612.80	2,381,800.95	3,003,413.75	.....	.....	.....
1882.....	478,274.85	2,024,297.63	2,502,482.48	.....	.....	.....
1883.....	357,334.81	1,882,542.41	2,239,877.22	.....	.....	.....
1884.....	278,888.85	1,686,302.09	1,965,190.94	.....	.....	.....
1885.....	207,782.80	1,518,202.29	1,725,985.19	.....	.....	.....
1886.....	144,389.59	1,458,896.44	1,603,286.03	.....	.....	.....
1887.....	105,837.01	1,755,582.26	1,871,419.37	\$53,148.68	\$2,458.08	\$55,606.76
1888.....	73,659.48	1,596,904.96	1,670,564.44	1,861,756.07	563,056.23	2,424,812.35
1889.....	53,800.27	1,397,487.09	1,450,287.36	1,796,899.30	698,872.45	2,495,771.75
1890.....	38,847.09	1,288,236.27	1,327,083.46	1,728,037.54	695,054.90	2,423,092.44
1891.....	22,504.64	1,040,284.41	1,062,789.05	1,622,114.76	695,314.53	2,317,429.27
Total.....	13,862,792.39	26,142,626.52	40,125,418.91	7,061,946.24	2,699,456.23	9,761,402.57

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classified statement of the number of pensioners on the rolls of each
y compared with the number on the rolls June 30, 1890.

Location of agency.	General law.				Act of June 27, 1890.			
	Army.		Navy.		Army.		Navy.	
	Invalids.	Widows, etc.	Invalids.	Widows, etc.	Invalids.	Widows, etc.	Invalids.	Widows, etc.
Columbus	46,303	11,962			11,707	1,406		
Topeka	37,178	6,929			13,856	1,349		
Indianapolis	42,401	8,831			4,481	652		
Chicago	34,363	8,475	1,145	343	8,055	851	937	241
Washington	24,084	4,972	989	548	10,397	913	924	296
Des Moines	28,530	4,663			5,939	516		
Boston	20,214	9,066	1,530	774	3,084	939	752	261
Philadelphia	19,601	7,311	816	414	0,249	1,158	582	270
Milwaukee	23,405	7,498			3,991	587		
Detroit	25,152	4,895			3,906	403		
Knoxville	23,773	4,813			4,278	436		
New York	12,442	4,853			0,286	639		
Pittsburgh	17,267	7,232	790	465	3,567	947	684	235
Louisville	19,584	5,407			5,938	534		
Concord	11,318	3,850			4,327	438		
Augusta	11,904	3,093			1,049	160		
San Francisco	10,773	3,500			774	174		
Total	5,215	700	179	34	1,252	197	97	23
of pen-	413,597	108,560	5,449	2,568	97,136	12,209	3,976	1,436
crease during year	20,788	4,104	175	108	97,136	12,209	3,976	1,436
decrease during year								

Location of agency.	War of 1812.		War with Mexico.		Number of pensioners on the rolls June 30, 1891.	Number of pensioners on the rolls June 30, 1890.
	Survivors.	Widows.	Survivors.	Widows.		
Columbus	21	608	583	272	72,862	56,233
Topeka	14	263	2,075	750	62,550	44,882
Indianapolis	7	289	713	317	57,771	50,196
Chicago	12	307	1,678	529	54,336	44,612
Washington	48	900	1,525	495	46,001	32,916
Des Moines	9	178	609	197	40,543	32,261
Boston	14	575	210	119	37,638	31,021
Philadelphia	1	273	406	248	37,329	29,366
Buffalo	41	586	150	59	36,817	30,609
Milwaukee	6	114	352	113	34,941	29,053
Detroit	11	226	237	93	33,867	27,143
Knoxville	32	1,419	4,033	2,512	32,816	25,230
New York	29	455	496	253	32,491	25,927
Pittsburgh	11	224	218	104	32,029	24,892
Louisville	11	334	775	387	21,440	16,023
Concord	8	239	62	24	17,139	15,427
Augusta	15	442	59	27	15,764	14,565
San Francisco	3	58	2,228	441	10,537	8,418
Total number of pensioners	284	7,590	16,379	6,976	676,100	537,944
Increase during year				212	138,216	
Decrease during year	129	1,020	779			

TABLE No. 11.—*Number of pensioners in each State and Territory of the United States and in each foreign country on the rolls June 30, 1891.*

United States.	Number.	Foreign country.	Number.
Alabama.....	2,065	Australia.....	21
Alaska.....	14	Austria Hungary.....	13
Arizona Territory.....	289	Belgium.....	8
Arkansas.....	5,994	Bermuda.....	1
California.....	8,064	Brazil.....	3
Colorado.....	3,381	British Columbia.....	13
Connecticut.....	8,713	Bulgaria.....	1
Delaware.....	1,764	Canada.....	* 1,315
District of Columbia.....	6,132	Central America.....	1
Florida.....	1,343	Chile.....	5
Georgia.....	1,671	China.....	12
Idaho.....	537	Corea.....	1
Illinois.....	49,711	Comoro Isles.....	1
Indiana.....	55,704	Cuba.....	5
Indian Territory.....	1,022	Denmark.....	13
Iowa.....	28,430	Ecuador.....	1
Kansas.....	29,421	Fiji Islands.....	2
Kentucky.....	21,441	France.....	36
Louisiana.....	1,788	Germany.....	403
Maine.....	17,610	Great Britain.....	495
Maryland.....	7,867	Guatemala.....	1
Massachusetts.....	25,953	Hawaii.....	8
Michigan.....	34,447	Holland.....	2
Minnesota.....	10,873	Honduras.....	1
Mississippi.....	1,641	India.....	1
Missouri.....	33,135	Italy.....	17
Montana.....	792	Japan.....	3
Nebraska.....	12,011	Liberia.....	2
Nevada.....	166	Mauritius.....	1
New Hampshire.....	7,767	Manitoba.....	1
New Jersey.....	13,375	Mexico.....	32
New Mexico Territory.....	450	Monaco.....	1
New York.....	60,325	Netherlands.....	8
North Carolina.....	2,497	New Zealand.....	3
North Dakota.....	977	Nicaragua.....	1
Ohio.....	75,498	Norway.....	12
Oklahoma Territory.....	1,387	Pern.....	1
Oregon.....	2,263	Portugal.....	3
Pennsylvania.....	63,986	Russia.....	1
Rhode Island.....	2,889	Samoa.....	1
South Carolina.....	814	Spain.....	5
South Dakota.....	3,572	South African Republic.....	4
Tennessee.....	12,214	Sweden.....	24
Texas.....	5,270	Switzerland.....	56
Utah Territory.....	544	Uruguay.....	1
Vermont.....	8,566	West Indies.....	7
Virginia.....	5,256	Unknown.....	99
Washington.....	2,885		
West Virginia.....	9,787		
Wisconsin.....	20,969		
Wyoming.....	364		
Total.....	673,514	Total.....	2,616
		Grand total.....	676,160

PAPERS ACCOMPANYING THE

ment showing the different monthly rates of pension, and the number rate, of the Army and Navy invalids, and of the Army and Navy dependents (year of 1861) on the rolls, under the general law, June 7, 1890.

GENERAL LAW, JUNE 30, 1891.

Rate.	Invalids.			Widows and others.			Rate.	Invalids.			Widows and others.		
	Army.	Navy.	Total.	Army.	Navy.	Total.		Army.	Navy.	Total.	Army.	Navy.	Total.
\$1.00	19	1	20				\$16.50	9	4	13			
2.00	10,853	183	17,036				16.75	12		12			
2.25	2		2				17.00	18,253	191	18,444	2,383	6	2,389
2.60	10		10				17.25		2	2			
3	1,013	29	1,042				17.50	15	7	22			
							17.75	4		4			
							18.00	2,823	34	2,857	63	1	64
							18.25		5	5			
							18.50		1	13			
	11,530	788	62,318				18.75	117	3	120			
							19.00	12	3	15			
							19.25	9		9			
							19.50		4	4			
							20.00	5,155	126	5,281	2,568	156	2,714
							20.50		1	1			
							20.75		2	2			
							21.00		4	5			
							21.25		3	3			
							21.50		1	3			
	52,071	510	52,581				22.00	3,138	72	3,210			
	49	3	52				22.50	104	4	108			
							23.00		1	1			
							23.25		3	3			
							23.50		1	1			
							23.75		1	1			
							24.00	19,063	283	20,246	3		3
							24.50		2	3			
	82,196	1,103	83,299	414	18	432	25.00	2,896	86	2,982	701	126	827
8.12							25.25		1	1			
8.25							25.75		3	3			
8.50	640		640				26.25		4	4			
8.62							26.75		1	2			
8.75							27.00	956	26	982			
9.00	596	5	561				27.50		7	7			
9.25							28.00		1	1			
9.50							28.75		1	1			
9.75							29.50		1	1			
10.00	34,825	433	35,258	2	1	3	30.00	14,616	218	14,834	648	261	849
10.20							30.75		2	2			
10.25							31.00		2	2			
10.50							31.25	58		58			
10.62							32.00		3	3	1		1
10.68							32.50		5	5			
10.75							33.00		1	2	3		
11.00							33.50		1	1	1		
11.25							35.00		2	3	2		
11.33							35.50		3	3			
11.50							36.00	3,169	41	3,210			
11.75							37.00		1	1			
12.00	45,588	509	46,097	100,215	1,872	102,087	37.50				1		
12.12							38.50						
12.25							40.00	55	1	56	15	5	20
12.50	153	24	177		1	1	40.25		1				
12.75	378	1	379				45.00	2,488	22	2,502	2		2
13.00	686	5	591				47.00	77		77			
13.25	8	7	15				48.00		1	1			
13.83							49.00	2					
13.50							50.00	381	1	382	68	64	132
13.75							53.00		1	1			
14.00	16,737	141	16,878		2	2	55.00		1	1			
14.25							57.00						
14.50							60.00	14		14			
14.75							72.00	3,074	87	3,161			
14.87							75.00		1	1			
15.00	2,940	102	3,042	1,450	112	1,562	100.00	33	3	36	5	3	5
15.25							106.66				6	1	7
15.50							208.23				1		1
15.75							416.66				3		3
16.00	17,682	183	17,865		1	1							
16.25													
							Total	413,697	5,449	419,046	168,560	2,568	111,128

TABLE NO. 12.—*Statement showing the different monthly rates of pension, and the number pensioned at each rate, of the Army and Navy invalids, etc.—Continued.*

ACT OF JUNE 27, 1890.

Rate.	Invalids.			Widows and others.		
	Army.	Navy.	Total.	Army.	Navy.	Total.
\$5.00.....	15,726	684	16,390	.....	.....	.....
8.00.....	19,563	806	20,369	10,833	1,409	12,233
10.00.....	4,684	185	4,869	.....	.....	.....
12.00.....	57,168	2,321	59,484	1,376	86	1,412
Total.....	97,136	3,976	101,112	12,209	1,495	13,645
Grand total.....	510,733	9,425	520,158	120,769	4,004	124,778

TABLE No. 13.—List of pension agencies, with location, geographical limits, and names of pension agents, showing the balance of funds in the hands of each agent June 30, 1891.

Location.		Name of agent.	Amount.	Geographical limits.
City.	State.			
Angusta.....	Maine.....	Joseph A. Clark.....	\$156,805.26	The State of Maine: Navy pensioners in this district paid at Boston, Mass.
Boston.....	Massachusetts..	William H. Osborne..	322,075.51	The States of Connecticut, Massachusetts, and Rhode Island, and all Navy pensioners residing in this and the Augusta and Concord districts.
Buffalo.....	New York.....	Jacob Schenkelt-berger.	360,819.70	The counties in the State of New York not in the New York City district: All Navy pensioners in the State are paid at New York City.
Chicago.....	Illinois.....	Isaac Clements.....	410,944.37	The State of Illinois and all Navy pensioners residing in this and the Columbus, Des Moines, Detroit, Indianapolis, Louisville, Milwaukee, and Topeka districts.
Columbus....	Ohio.....	John G. Mitchell....	869,633.56	The State of Ohio: Navy pensioners in this district paid at Chicago.
Concord.....	New Hampshire.	Thomas P. Cheney....	231,474.80	The States of New Hampshire and Vermont: Navy pensioners in this district paid at Boston.
Des Moines...	Iowa.....	Stephen A. Martine...	351,168.74	The States of Iowa and Nebraska: Navy pensioners in this district paid at Chicago.
Detroit.....	Michigan.....	Edward H. Harvey...	273,685.74	The State of Michigan: Navy pensioners in this district paid at Chicago.
Indianapolis..	Indiana.....	Nicholas Ensley....	346,100.08	The State of Indiana: Navy pensioners in this district paid at Chicago.
Knoxville....	Tennessee.....	William Rule.....	175,574.40	The States of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Texas: Navy pensioners in this district paid at Washington, D. C.
Louisville....	Kentucky.....	C. J. Walton.....	383,174.09	The State of Kentucky: Navy pensioners in this district paid at Chicago.
Milwaukee...	Wisconsin.....	Levi E. Pond.....	402,030.96	The States of Minnesota, North Dakota, South Dakota, and Wisconsin: Navy pensioners in this district paid at Chicago.
New York....	New York.....	Frank C. Loveland..	394,843.22	The counties in the State of New York of Albany, Clinton, Columbia, Delaware, Dutchess, Essex, Greene, Kings, Queens, Rensselaer, Saratoga, Schoharie, Sullivan, Ulster, Warren, Washington, and Westchester: All Navy pensioners in the State of New York, and all pensioners residing in the counties of the State of New Jersey, of Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, and Warren.
Philadelphia..	Pennsylvania....	William H. Shelmore	169,820.97	The counties in the State of Pennsylvania of Berks, Bradford, Bucks, Carbon, Chester, Columbia, Dauphin, Delaware, Lancaster, Lebanon, Lehigh, Luzerne, Monroe, Montgomery, Montour, Northampton, Northumberland, Philadelphia, Pike, Schuylkill, Sullivan, Susquehanna, Wayne, Wyoming, and York, and all Navy pensioners in the State of Pennsylvania, and all pensioners residing in the counties in the State of New Jersey of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, and Salem.
Pittsburg....	Pennsylvania....	Herbert H. Bengough	149,741.49	The counties in the State of Pennsylvania not in the Philadelphia district: All Navy pensioners in the State are paid at Philadelphia.
San Francisco	California.....	John C. Carrier.....	229,101.28	The States of California, Idaho, Montana, Nevada, Oregon, Washington, and Wyoming, the Territories of Alaska, Arizona, and Utah, including the Navy pensioners in the Territories of New Mexico, Oklahoma, and the Indian Territory: Navy pensioners in this district, the Territory of Colorado, Kansas, and Missouri, are paid at Chicago.
Topeka.....	Kansas.....	Bernard Kelly.....	40,898.39	The States of Delaware, Maryland, Virginia, and West Virginia, and all pensioners residing in the counties of the branches of the National Soldiers' Home, and pensioners residing in foreign countries, and all Navy pensioners in this and the Knoxville district.
Washington..	District of Co- lumbia.	Sidney L. Willson..	445,051.27	
			5,713,852.84	

TABLE NO. 14.—Number of pension claims filed and allowed each year since July, 1861, and the number of pensioners on the rolls at the close of each year, together with the annual amount paid on account of pensions since July 1, 1860.

Fiscal year ending June 30—	Army.				Navy.				Army and Navy.				War of 1812.				Total number of applications filed.	Total number of claims allowed.		Number of pensioners on the roll.		Disbursements.
	Applications filed.		Applications filed.		Applications filed.		Applications filed.		Claims allowed.		Claims allowed.		Claims allowed.									
	Invalids.	Widows, etc.	Invalids.	Widows, etc.	Invalids.	Widows, etc.	Invalids.	Widows, etc.	Invalids.	Widows, etc.	Invalids.	Widows, etc.	Invalids.	Widows, etc.								
1861.....	1,362	1,000	65	413	49	5,074	198	17,504	3,117	2,487	462	4,337	4,299	8,636	\$1,072,461.55							
1862.....	26,260	32,377	290	385	284	3,818	7,284	30,457	7,284	49,352	7,284	3,818	3,818	8,169	790,354.76							
1863.....	20,263	22,627	385	324	27,416	3,763	49	17,041	3,763	53,599	30,457	7,284	6,970	14,791	1,025,139.91							
1864.....	27,269	24,464	455	366	15,212	3,950	455	15,212	3,950	72,684	50,177	35,890	27,656	51,135	4,504,016.92							
1865.....	35,799	28,732	350	375	27,294	3,763	455	22,853	3,763	72,684	50,177	35,890	50,106	85,989	8,925,153.11							
1866.....	15,905	20,965	250	333	16,589	19,803	3,763	455	16,589	19,803	3,763	455	71,070	126,732	13,450,956.43							
1867.....	7,592	13,699	170	207	9,460	19,461	3,763	455	9,460	19,461	3,763	455	83,618	153,183	18,619,056.46							
1868.....	11,635	14,400	290	245	7,292	15,904	3,763	455	7,292	15,904	3,763	455	103,104	187,063	24,019,981.99							
1869.....	12,901	11,400	260	200	5,721	12,500	3,763	455	5,721	12,500	3,763	455	111,165	198,686	28,422,884.06							
1870.....	8,837	8,985	190	142	7,024	8,309	3,763	455	7,024	8,309	3,763	455	114,101	207,405	32,077,405.81							
1871.....	8,857	6,755	240	178	6,468	7,244	3,763	455	6,468	7,244	3,763	455	118,275	232,229	30,169,341.00							
1872.....	8,728	6,427	248	120	6,551	4,073	3,763	455	6,551	4,073	3,763	455	118,911	238,411	29,183,286.63							
1873.....	9,302	5,603	228	151	5,937	3,152	3,763	455	5,937	3,152	3,763	455	119,056	236,241	30,593,749.56							
1874.....	11,920	5,294	310	178	5,760	4,376	3,763	455	5,760	4,376	3,763	455	121,628	234,821	29,683,116.68							
1875.....	16,532	5,269	271	130	5,360	3,19	3,763	455	5,360	3,19	3,763	455	122,999	232,104	28,351,599.69							
1876.....	18,812	6,601	300	97	7,282	3,861	3,763	455	7,282	3,861	3,763	455	124,225	232,104	28,590,137.64							
1877.....	36,835	9,767	509	131	7,414	3,550	3,763	455	7,414	3,550	3,763	455	125,349	232,104	28,590,137.64							
1878.....	110,673	25,662	1,361	509	7,243	3,379	3,763	455	7,243	3,379	3,763	455	126,619	232,104	28,590,137.64							
1879.....	18,455	10,527	472	569	10,176	4,455	3,763	455	10,176	4,455	3,763	455	128,392	232,104	28,590,137.64							
1880.....	29,604	10,349	777	225	10,349	3,999	3,763	455	10,349	3,999	3,763	455	129,601	232,104	28,590,137.64							
1881.....	35,039	11,289	671	211	12,046	3,999	3,763	455	12,046	3,999	3,763	455	130,653	232,104	28,590,137.64							
1882.....	47,505	18,444	1,251	244	12,046	3,999	3,763	455	12,046	3,999	3,763	455	131,295	232,104	28,590,137.64							
1883.....	52,122	28,597	2,162	244	12,046	3,999	3,763	455	12,046	3,999	3,763	455	132,347	232,104	28,590,137.64							
1884.....	71,579	28,597	2,162	244	12,046	3,999	3,763	455	12,046	3,999	3,763	455	133,399	232,104	28,590,137.64							
1885.....	20,519	17,521	1,404	590	41,381	11,914	11	149	4	4	4	4	134,446	232,104	28,590,137.64							
1886.....	37,659	13,238	862	245	31,937	8,610	27	373	18	429	40,895	56,104	309,298	196,709	400,007	70,646,146.37						
1887.....	47,505	18,444	1,251	245	31,937	8,610	27	373	18	429	40,895	56,104	309,298	196,709	400,007	70,646,146.37						
1888.....	52,122	28,597	2,162	245	31,937	8,610	27	373	18	429	40,895	56,104	309,298	196,709	400,007	70,646,146.37						
1889.....	71,579	28,597	2,162	245	31,937	8,610	27	373	18	429	40,895	56,104	309,298	196,709	400,007	70,646,146.37						
1890.....	803,709	440,611	17,583	531,873	289,918	34,928	45,612	25,707	35,347	1,716,986	1,012,241	1,277,261	283,07									

In the total number of applications filed in 1891 are included \$16,080 invalids and 76,370 widows, etc., under the act of June 27, 1890, and 763 survivors and 875 widows of the war with Mexico. In the number of claims allowed in 1891 are included \$8,611 invalids and 13,776 widows, etc., under the act of June 27, 1890, and 836 survivors and 895 widows of the war with Mexico. In the number of pensioners on the roll under the heads of "invalids" and "widows, etc.," are included pensioners under the act of June 27, 1890, and survivors and widows of the war of 1812 respectively, commencing with the year 1871, and survivors and widows of the war with Mexico, commencing with the year 1867. There were also filed during the year 338,562 applications under the act of June 27, 1890, in cases in which pension had already been allowed or applied for.

by invalid claims under the general law allowed each year since July 1, 1900, and the number of such claims allowed in the report years, giving also the whole number filed each year.

	1802.	1803.	1804.	1805.	1806.	1807.	1808.	1809.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.
305				27	19	20	12	11	12	20	6	6	16	4	5	7	4
				1,138	517	395	235	185	143	293	156	110	129	159	121	139	147
				3,459	844	562	253	166	114	239	139	96	107	101	84	126	141
				10,045	7,819	1,863	685	417	223	382	198	132	100	92	96	113	123
					12,724	9,292	3,511	1,150	529	732	440	251	211	185	145	187	202
						3,586	3,626	1,132	525	724	349	356	149	153	88	154	139
							1,641	1,692	421	562	218	196	172	89	56	62	59
										1,284	493	300	182	142	124	97	102
										3,094	1,639	799	441	273	167	197	132
										342	1,946	1,055	438	348	214	149	125
											434	1,638	1,018	371	278	276	214
												1,322	1,762	674	342	461	253
													794	1,869	806	593	243
														937	2,243	1,169	483
															624	2,595	1,844
																777	2,217
																	908
Total	305	3,915	16,765	14,669	21,923	15,718	8,963	6,991	5,215	7,612	6,018	6,261	5,519	5,397	5,193	7,102	7,303

NOTE.—The total number (40,453) of claims allowed in 1891 excludes 124 old war

1, 1861, showing in each year's allowance the number of those which were filed each year and the percentage of the number allowed out of those filed each year.

The several years in which the claims were allowed and the number allowed each year.														Number of invalid claims filed each year.	Per cent of claims allowed of each year's filing.
1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	Total.		
5	24	78	38	18	0	16	15	17	9	10	7	16	1,125	1,362	82.6
135	281	415	392	384	263	280	269	248	230	191	195	150	19,688	20,380	74.0
100	228	395	328	305	240	264	220	226	194	142	138	121	16,603	20,263	81.8
92	172	335	234	284	189	204	168	160	110	125	121	85	24,566	27,299	90.0
158	257	477	368	335	255	236	219	208	177	136	130	125	31,640	35,799	88.4
104	190	339	281	262	202	263	187	184	131	107	97	77	13,405	15,905	84.3
49	109	177	99	124	93	190	80	92	61	52	51	31	6,316	7,292	86.6
54	143	312	267	208	180	282	141	141	115	92	90	69	9,264	11,035	84.0
121	220	451	379	319	243	363	233	234	164	138	115	123	10,885	12,991	83.8
100	228	368	293	243	218	241	211	165	125	116	116	78	7,119	8,837	80.6
153	251	404	328	288	231	314	226	193	144	110	110	81	7,068	8,857	79.8
123	257	454	330	274	209	221	197	186	161	103	136	93	7,558	8,728	80.6
188	328	497	384	312	213	385	254	213	169	117	128	110	7,403	9,302	79.6
273	455	766	559	478	349	461	323	277	239	158	176	137	9,473	11,926	79.4
608	758	1,219	905	773	578	630	570	565	413	316	338	267	13,003	17,030	76.4
1,484	1,063	1,570	1,050	1,006	709	740	698	618	444	331	340	284	13,311	16,532	80.5
2,568	1,806	2,385	1,400	986	888	879	816	773	559	413	475	326	15,182	18,812	80.7
778	2,685	7,767	4,865	4,116	2,298	2,045	1,819	1,618	1,065	836	870	665	31,367	36,835	85.2
203	2,358	9,825	17,626	12,277	9,706	9,329	7,880	5,613	3,895	4,159	2,814	85,945	110,673	77.7	
.....	155	157	1,350	1,651	1,499	1,555	1,463	1,109	909	1,030	799	11,677	18,455	63.3	
.....	.....	133	1,485	2,326	2,245	2,067	2,526	2,038	1,512	1,709	1,228	17,869	29,004	61.6	
.....	.....	.....	583	2,579	2,517	3,279	3,188	2,720	2,090	2,303	1,695	20,953	35,039	59.8	
.....	.....	.....	.....	917	2,434	3,092	2,736	2,303	1,834	1,929	1,380	16,685	28,962	57.6	
.....	.....	.....	.....	.....	810	3,901	3,443	2,696	2,038	2,182	1,429	16,499	27,950	59.0	
.....	.....	.....	.....	.....	.....	883	5,842	5,423	3,849	3,714	2,163	21,874	35,202	62.1	
.....	.....	.....	.....	.....	.....	.....	1,506	6,383	5,317	4,967	2,826	20,999	36,204	58.0	
.....	.....	.....	.....	.....	.....	.....	.....	2,234	9,499	9,240	4,476	25,449	47,349	53.7	
.....	.....	.....	.....	.....	.....	.....	.....	.....	1,557	12,180	7,784	21,521	51,919	41.0	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,407	10,375	12,782	71,318	17.9	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	706	706	20,199	3.5	
7,073	9,718	20,912	22,615	31,758	27,117	27,225	31,552	34,702	35,089	35,999	49,453	40,453	517,935	807,468	.....

invalids, which are included in the number of army invalids as reported in Table 1.

PAPERS ACCOMPANYING THE

Number of claims of each class filed, admitted, and rejected during the
ACTS OF JULY 14, 1862, AND MARCH 3, 1873.

Year ending June 30, 1891.	Army.						Navy.		
	Invalid.			Widows, etc.			Invalid.		
	Original.	Increase.	Total.	Original.	Increase.	Total.	Original.	Increase.	Total.
Claims filed June 30, 1891.	306,827	220,260	536,087	148,363	964	149,327	9,212	1,763	10,965
Claims admitted	26,519	138,835	159,354	17,521	755	18,276	1,404	1,765	3,169
Claims rejected	280,308	281,425	561,733	130,842	1,719	132,561	7,808	3,518	11,326
Total disposed of...			814,135			281,111			2,577
Claims pending June 30, 1891.	147,745	107,535	255,280	74,367	1,008	75,375	4,513	2,041	6,554
Claims on rejected files June 30, 1891.	18,588		18,588	70,816		70,816	5,290		5,290
Total June 30, 1891.	166,333	107,535	273,868	145,183	1,008	146,191	9,812	2,041	11,853

ACT OF JUNE 27, 1890.

Fiscal year ending June 30, 1891.	Army.					
	Invalid.			Widows, etc.		
	Original.	Additional.	Total.	Original.	Additional.	Total.
Claims filed during the year.....	227,928	247,362	475,290	73,665	83,306	156,971
Claims admitted.....	85,047	13,152	98,199	12,337	5	12,342
Claims rejected.....	18,588	161	18,749	2,875		2,875
Total disposed of...	103,635	13,313	116,948	15,212	5	15,217
Claims pending June 30, 1891.....	124,293	234,049	358,342	58,453	83,301	141,754
Claims on rejected files June 30, 1891.....	18,588	161	18,749	2,875		2,875
Total June 30, 1891.	142,881	234,210	377,091	61,328	83,301	144,629

Under the head of "Widows, etc.," in the Army and Navy classes are included minor children and dependent relatives.

There were received during the year 359 applications for bounty-land warrants, 48 were issued and 87 were rejected; at the close of the year 953 applications were pending, and 93,806 were on the rejected files.

There were allowed during the year 33 claims for arrears of pension in the case of those who were in receipt of a pension January 25, 1879, and granted arrears by the act of that date.

year, and the comparative condition of the files at the beginning and close of the year.

ACTS OF JULY 14, 1862, AND MARCH 3, 1873.

Navy.			Army and Navy restorations.	Total Army and Navy.	War of 1812.				Mexican war (act of January 29, 1857).		Total number of original claims.	Aggregate of all classes.
Widows, etc.					Survivors.		Widows.					
Original.	Increase.	Total.			Original.	Increase.	Original.	Increase.	Survivors, original.	Widows, original.		
3,729	30	3,759	.....	700,138	9,279	1	9,796	2	3,604	2,046	492,916	724,926
590	30	620	.....	181,419	11	4	140	9	706	875	41,766	183,164
4,319	60	4,379	.....	881,557	9,290	5	9,936	11	4,370	2,921	534,682	908,090
213	33	246	*1,812	126,042	4	3	79	.....	336	385	54,099	126,849
97	.....	97	.....	213,318	.....	.....	.....	.....	148	101	23,583	1213,567
310	33	343	.....	339,360	4	3	79	.....	484	466	77,632	340,416
1,995	27	2,022	.....	339,231	113	2	370	11	1,048	1,518	231,669	342,293
2,111	.....	2,111	.....	226,280	9,173	.....	9,487	.....	2,986	1,018	248,914	248,914
4,106	27	4,133	.....	565,481	9,286	2	9,857	11	4,034	2,536	480,583	591,207

ACT OF JUNE 27, 1890.

Navy.						Aggregate of all classes.	Remarks.
Invalid.			Widows, etc.				
Original.	Additional.	Total.	Original.	Additional.	Total.		
15,752	2,557	18,309	4,605	4,605	655,175	Those under the head of "Additional" consist of applicants who have also prior claims under old acts. During the year there were 443 renewals under act of June 27, 1890.
3,564	405	3,969	1,439	.....	1,439	115,949
834	.....	834	132	.....	132	22,590
4,398	405	4,803	1,571	.....	1,571	138,589
11,354	2,152	13,506	3,034	.....	3,034	516,686
834	.....	834	132	.....	132	22,590
12,188	2,162	14,340	3,166	3,166	539,226	

* In addition to the above there were 2 widows, war of 1812, and 2 widows, Mexican war, restored during the year.

† This includes a large number of claims which were found by actual count to be duplicates; also claims which were rejected, and after such action they were returned to the admitted files.

During the year there were 65 increase Mexican cases, and 13 increase widows, war of 1812, allowed by special act.

TABLE NO. 17.—*Comparative statement of pension claims settled*
 ACTS OF JULY 14, 1862, AND MARCH 3, 1873.

Year.	Claims admitted and rejected.	Army.						Navy.		
		Invalid.			Widows, etc.			Invalid.		
		Original.	Increase.	Total.	Original.	Increase.	Total.	Original.	Increase.	Total.
1881..	Admitted	21,143	12,353	33,496	3,717	266	3,917	251	154	405
1881..	Rejected	2,625	8,875	11,500	1,137	30	1,167	55	65	120
	Total	23,768	21,228	44,996	4,854	230	5,084	306	219	525
1882..	Admitted	22,684	9,435	32,119	3,910	48	3,958	262	88	350
1882..	Rejected	4,030	15,199	19,229	1,512	26	1,538	128	149	277
	Total	26,714	24,634	51,348	5,422	74	5,496	390	237	627
1883..	Admitted	31,861	22,554	54,355	5,216	67	5,283	213	112	325
1883..	Rejected	16,961	19,978	36,879	4,512	28	4,540	530	141	671
	Total	48,702	42,532	91,234	9,728	95	9,823	743	253	996
1884..	Admitted	27,173	22,100	49,263	6,260	56	6,316	241	270	511
1884..	Rejected	17,587	19,887	37,474	4,983	15	4,998	347	139	486
	Total	44,760	42,077	86,837	11,243	71	11,314	588	409	997
1885..	Admitted	27,286	33,648	60,934	7,632	144	7,776	294	182	476
1885..	Rejected	9,028	19,281	28,309	3,658	28	3,686	189	89	278
	Total	36,314	52,929	89,243	10,690	172	10,862	483	271	754
1886*	Admitted	31,619	33,008	64,627	8,501	*65,313	73,814	318	271	589
1886..	Rejected	15,918	41,956	57,874	3,728	50	3,778	277	279	556
	Total	47,537	74,964	122,501	12,229	65,363	77,592	595	550	1,145
1887..	Admitted	34,758	31,791	66,549	11,034	83	11,117	525	223	748
1887..	Rejected	7,657	32,024	39,681	3,481	70	3,551	321	247	568
	Total	42,415	63,815	106,230	14,515	153	14,668	846	470	1,316
1888..	Admitted	35,089	44,785	79,874	10,611	341	10,952	754	449	1,203
1888..	Rejected	32,213	30,739	62,952	11,060	50	11,110	740	326	1,066
	Total	67,302	75,524	142,826	21,671	391	22,062	1,494	775	2,269
1889..	Admitted	35,999	70,194	106,193	11,644	116	11,760	831	744	1,576
1889..	Rejected	11,122	37,049	48,171	5,689	41	5,730	1,160	442	1,602
	Total	47,121	107,243	154,364	17,333	157	17,490	1,991	1,186	3,177
1890..	Admitted	49,453	76,511	125,964	14,323	120	14,443	942	901	1,843
1890..	Rejected	8,120	99,013	107,133	5,791	50	5,841	392	977	969
	Total	57,573	175,524	233,097	20,114	170	20,284	1,334	1,878	3,212
1891..	Admitted	40,577	71,679	112,156	11,701	474	12,175	804	661	1,465
1891..	Rejected	12,998	188,981	201,979	9,899	237	10,136	290	816	1,106
	Total	53,575	260,560	314,135	21,600	711	22,311	1,094	1,477	2,571

* Under act of March 19, 1886, there were 79,989 widows' pensions increased (included in the above) for which no applications were required.

REPORT OF THE SECRETARY OF THE INTERIOR.

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by allowance and rejection each year since 1881, except arrears.

ACTS OF JULY 14, 1862, AND MARCH 3, 1873.

Navy.			Army and Navy restorations.	Total Army and Navy.	War of 1812.				Mexican war (act of Jan. 28, 1857).		Total number of original claims.	Aggregate of all classes.
Widows, etc.					Survivors.		Widows.		Survivors original.	Widows original.		
Original.	Increase.	Total.			Original.	Increase.	Original.	Increase.				
203 83	10	213 83	1,344 20	29,375 13,890	115 391	..... .....	1,065 1,005	..... .....	..... .....	..... .....	..... .....	41,455 14,896
286	10	296	1,364	52,265	506	.....	3,570	.....	.....	.....	.....	56,341
89 59	11	100 59	649	37,176 21,103	26 49	..... .....	698 143	..... .....	..... .....	..... .....	..... .....	37,895 21,235
148	11	159	649	58,279	75	.....	836	.....	.....	.....	.....	59,190
87 346	13	100 346	796	60,859 42,438	23 51	..... .....	822 200	..... .....	..... .....	..... .....	88,162 23,540	61,704 42,687
433	13	446	796	102,295	74	.....	1,022	.....	.....	.....	60,702	104,391
106 113	1	107 113	1,221	57,518 43,071	24 50	..... .....	388 269	..... .....	..... .....	..... .....	24,192 23,841	87,930 49,353
218	2	220	1,221	100,589	74	.....	650	.....	.....	.....	57,593	101,313
111 57	11	122 57	1,835	71,143 81,730	18 88	..... .....	426 167	..... .....	..... .....	..... .....	35,767 12,587	71,567 81,935
168	11	179	1,835	102,873	56	.....	593	.....	.....	.....	48,304	103,532
109 385	*1,280 2	1,389 387	2,229	*142,648 63,596	5 23	3	305 113	12,396 2	..... .....	..... .....	40,857 20,443	*156,357 63,733
494	1,282	1,776	2,229	205,243	27	3	418	12,396	.....	.....	61,300	219,080
183 91	8 1	191 92	2,707	81,312 43,892	8 18	2	231 59	..... .....	7,552 251	903 14	55,194 11,892	90,008 44,234
274	9	283	2,707	125,204	26	2	290	.....	7,803	917	67,086	134,242
205 235	11	216 235	2,028	92,245 75,363	2 11	..... .....	251 56	..... .....	9,048 2,062	4,296 588	60,252 46,965	105,838 78,086
440	11	451	2,028	167,608	13	.....	307	.....	11,110	4,680	107,227	183,918
280 341	11	291 341	1,754	119,819 55,844	8 10	8	181 268	7	1,773 348	1,206 209	51,921 19,147	123,001 56,679
621	11	632	1,754	175,663	18	8	449	7	2,120	1,415	71,068	179,680
335 126	7 3	342 129	1,896	142,592 114,072	4 5	2	108 75	1	794 177	678 106	66,337 14,793	144,179 114,436
461	10	471	1,896	256,664	9	3	183	1	971	784	81,430	258,615
213 97	33	246 97	1,812	126,042 213,318	4	3	79 .....	..... .....	336 148	385 101	54,090 23,533	126,849 213,567
310	33	343	1,812	339,360	4	8	79	.....	484	486	77,033	340,416

† This includes a large number of claims which have been found by actual count to have been thus disposed of.

PAPERS ACCOMPANYING THE

comparative statement of pension claims settled by allowance and rejection each year since 1881, except arrears—Continued.

ACT OF JUNE 27, 1890.

ST.	Claims admitted and rejected.	Army.					
		Invalid.			Widows, etc.		
		Original.	Additional.	Total.	Original.	Additional.	Total.
	Admitted	85,047	12,152	98,199	12,337	5	12,342
	Rejected	18,588	161	18,749	2,875	.....	2,875
	Total	103,635	12,313	116,948	15,212	5	15,217

Claims admitted and rejected.	Navy.						Aggregate of all claims	Remarks.
	Invalid.			Widows, etc.				
	Original.	Additional.	Total.	Original.	Additional.	Total.		
Admitted..	3,564	405	3,969	1,439	.....	1,439	115,949	Those under the head of "additional" consist of applicants who have also prior claims under old acts
Rejected..	834	.....	834	132	.....	132	22,590	
Total..	4,398	405	4,803	1,571	.....	1,571	138,539	

TABLE NO. 18.—*Report of certificates issued during the fiscal year ending June 30, 1891.*

Months.	Original.										Under acts of—										Total.							
	Army.		Navy.		Act of June 27, 1860.				War of 1812.		Old war.		Mexican war.	Increase.	Additional, etc., act of June 27, 1860.	Release.	Restoration.	Under acts of—					Accrued pension.	Arrears.				
	Invalids.	Widows, etc.	Invalids.	Widows, etc.	Army Invalids.	Army widows, etc.	Navy Invalids.	Navy widows, etc.	War of 1812.		Old war.																	
									Survivors.	Widows.	Invalids.	Widows.						Survivors.	Widows.									
1890.																												
July	6,455	1,731	104	30																								15,368
August	4,460	1,443	84	30																								8,957
September	2,820	1,412	43	20																								13,669
October	2,814	1,480	93	21	153	50	19	9	3	9	11	23	16	7,927	1,063	1,025	188	7	8	3	78	159	392				16,410	
November	2,628	1,443	26	11	901	181	113	77	3	8	9	17	18	8,501	1,709	1,008	157	8	3	3	76	70	277				14,585	
December	2,675	770	60	6	3,740	994	307	161	4	8	8	55	20	9,894	1,133	949	157	4	1	1	29	1	346				18,300	
1891.																												
January	4,611	1,158	76	22	8,000	1,416	277	923		14	18	35	57	4,832	1,073	1,042	166	10	3	0	27	103	424				22,093	
February	2,253	593	31	15	7,860	1,335	326	137		3	3	20	12	5,911	1,848	843	138	3									17,078	
March	3,012	795	62	18	10,042	1,858	669	272		10	16	39	33	5,272	2,438	1,625	180	3	3	4	22	39	203				26,242	
April	3,450	898	120	26	14,385	1,919	808	240		8	18	11	39	4,271	2,711	1,315	160	1	2	2	7	55	416				32,045	
May	2,223	760	47	13	15,108	2,454	643	221		5	5	1	41	4,776	2,547	830	120	3	1	2	8	13	54	518				29,585
June	2,321	432	49	11	12,683	2,121	402	119		5	2	1	37	1,829	1,846	569	88	2	2	1	10	6		486				33,009
	40,453	11,636	804	213	85,047	12,337	3,564	1,429	4	79	124	65	326	395	61,453	11,290	1,812	59	26	49	371	19	621	4,731	33			250,565

* Of the "Additional, etc.," act June 27, 1891, 443 were renewals, 12 releases, and 2 supplementals.

TABLE NO

rations of the special-examination service of the office, showing investment made, etc., during the fiscal year ending June 30, 1891.

	Number of investigations made, 1890.	Expenses in 1890.	Number of investigations made, 1891.	Expenses in 1891.
of cases returned by special examiners in				
d of special examiners, subsistence	32,598		24,359	
nse of special examiners, travel, etc. (including		\$250,578.21		\$214,886.73
f of travel over subsidized railroads)		138,833.69		132,713.01
Total	32,598	389,411.90	24,359	347,599.80

Statement showing a comparison of work performed by special examiners, with cost of same, during fiscal years ending June 30, 1890 and 1891.

	1890.	*1891.
Number of examiners per month	230	198
Number of examiners per month	32,598	24,359
Number of examiners per month	114	104
Number of examiners per month	162,875	127,069
Number of examiners per month	581	534
Number of examiners per month	\$389,411.90	\$347,599.80
Average cost of each deposition	\$11.95	\$14.27
Average cost of each deposition	\$2.39	\$2.74

Work accomplished by review section during fiscal years ending June 30, 1890 and 1891.

	1890.	1890.	1891.	1891.
Reviewers employed, average number of		8		7
Number of days employed		2,418		1,820
Number of cases submitted for admission		1,673		2,097
Number of cases submitted for rejection		233		236
Number of cases submitted for further examination		22,904		14,027
Number of cases otherwise disposed of		1,242		1,171
Number of cases reviewed		26,052		17,511
Number of circulars, calls, and letters to special examiners		1,906		1,546
Number of cases in division, July 1, 1890			10,534	
Number of cases received from July 1, 1890 to June 30, 1891			9,319	19,853
Number of cases submitted to board of review	16,048		12,892	
Number of cases sent to admitted files	186		95	
Number of cases sent to other divisions	2,970	19,204	3,349	
Total number of cases in division July 1, 1890 and 1891		10,534		16,336
Number of cases detailed to special examiners in field:				
Original examination	16,250		8,390	
Further examination	28,705		16,278	
Criminal examination	435	45,390	230	24,898
Number of reports made by special examiners upon cases returned from the field		43,676		31,450

* The increased cost per case examined in the field, for the past fiscal year, as compared with the cost of same for the preceding year, was caused by the examiners having much larger territory to travel over and less work in any given locality, making it necessary many times to make trips of hundreds of miles to obtain only one deposition.

TABLE NO. 20.—*Detailed report of work completed in the army and navy survivors' division from July 1, 1890, to June 30, 1891, inclusive, showing number of names with post-office addresses supplied to the adjudicating divisions, the special examination division, and to claimants or their attorneys.*

	Commis- sioned officers.	Non- commis- sioned officers.	Privates.	Total of names.	Total of cases.	Special names.
Eastern division.....	4,358	5,793	17,928	28,079	3,456	1,625
Middle division	2,965	3,507	11,415	17,887	2,402	1,313
Western division	3,212	3,465	12,197	18,874	2,317	1,789
Southern division	1,653	1,952	7,679	11,284	1,398	561
Old war and navy division	1,506	1,440	6,062	9,008	1,440	1,154
Special-examination division	837	1,022	3,800	5,659	857	469
Miscellaneous calls division	16,009	14,272	34,858	65,139	14,240	16,266
Totals	30,540	31,451	93,939	155,930	26,210	23,177

Total number of names with post-office addresses furnished in 26,210 cases	155,930
Addresses supplied to specified names	23,177
Circular lists of officers and comrades	14,840
Letters and circular letters	11,104
Circular cards sent out	291,441
Jackets written for the record division, October and November	13,820
Calls on Adjutant-General U. S. A.	2,025
Calls on Surgeon-General U. S. A.	375
Calls on Navy Department	899
Post-office addresses of surgeons furnished during the year	4,504

TABLE No. 21.—*Report of the mail division for the fiscal year ending June 30, 1891.*

	1890.										1891.				Total.
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.			
Original invalid cases*.....	4,340	2,479	2,387	2,345	2,242	1,992	2,076	2,040	2,426	2,291	1,859	1,754	28,240		
Original widows' cases*.....	2,213	1,651	2,075	1,829	1,651	1,680	1,584	1,442	1,509	1,532	1,501	1,309	26,066		
Original 1812 cases*.....	11	22	24	9	12	17	15	9	9	12	12	8	100		
Original bounty-land cases*.....	29	31	43	49	29	31	32	21	45	29	31	32	392		
Original Navy cases*.....	177	87	130	118	100	108	122	119	138	135	135	117	1,424		
Original old war cases and Mexican service.....	160	102	182	148	149	118	151	151	136	147	135	112	1,824		
Applications for increase.....	14,425	14,598	13,962	11,488	9,883	14,082	13,000	10,760	11,345	8,444	7,022	9,009	138,638		
Communications from the Departments.....	2,242	1,652	1,326	1,641	1,092	2,093	2,377	2,238	2,525	3,365	3,793	3,600	29,454		
Applications (act June 27, 1890).....	64,292	330,278	71,177	36,205	24,391	23,009	22,765	20,630	23,607	21,392	18,461	21,204	67,409		
Applications for accrued pension.....	423	408	524	390	343	576	439	406	725	577	670	845	6,329		
Pieces of additional evidence.....	40,673	48,158	58,548	48,232	57,939	81,471	97,435	90,863	110,396	154,094	102,746	91,958	982,498		
Fee agreements in duplicate.....	7,890	8,290	7,320	7,726	7,589	7,523	7,368	13,420	10,364	28,055	7,388	6,884	119,803		
Applications for transfer.....	112	88	95	103	93	93	148	98	116	147	95	129	1,317		
Applications for new certificate.....	134	154	131	136	166	183	151	129	116	144	125	213	1,865		
Reports from Adjutant-General.....	13,105	10,101	8,584	10,238	13,289	22,333	41,978	41,448	44,030	43,613	42,551	55,277	345,967		
Reports from Surgeon-General.....	64	29	41	33	41	69	69	47	43	34	50	38	538		
Miscellaneous letters (not inquiries).....	17,585	15,932	14,817	13,722	14,470	15,935	19,644	15,648	20,688	24,332	21,665	21,202	215,066		
Pension certificates returned by pension agents.....	6,161	8,894	4,126	9,700	6,389	5,766	6,989	7,979	6,475	8,055	2,086	8,204	89,721		
Surgeons' certificates.....	25,360	21,037	14,666	17,699	16,700	31,664	38,770	44,856	61,825	61,538	51,230	63,403	438,678		
Orders for medical examination returned.....	20,002	19,080	15,798	17,614	15,943	22,954	43,496	28,802	60,744	64,373	49,641	40,956	400,003		
Accounts from examining surgeons.....	8,018	8,792	8,765	8,654	8,026	10,302	11,487	10,899	13,854	12,314	12,331	15,819	130,161		
Reports from pension agents.....	3,697	3,739	3,714	4,313	2,328	2,644	2,195	1,906	1,806	1,648	1,929	1,775	31,354		
Reports from cases from special examiners.....	144	147	142	126	131	141	135	126	144	137	137	235	1,785		
Daily reports of special examiners.....	9,633	9,598	9,542	6,966	4,918	4,800	4,600	4,073	4,399	4,189	4,079	4,352	70,876		
Credibility of witness circulars.....	7,452	6,410	6,116	4,091	5,915	5,760	6,235	4,538	7,538	5,908	5,112	4,758	68,923		
Number of dead letters returned by Post-Office Department.....	3,291	2,486	2,125	4,590	7,101	6,819	9,521	9,993	12,194	11,870	7,980	10,126	88,101		
Army and Navy survivors' cards.....	5,022	6,040	6,228	18,067	4,746	11,628	21,538	26,495	32,779	14,123	26,373	45,017	216,576		
Congressional communications.....	14,732	14,659	14,413	7,963	6,881	19,743	21,902	17,458	13,367	8,137	7,253	8,429	154,817		
Letters of inquiry.....	69,161	67,035	87,694	94,584	84,351	78,800	63,680	85,425	121,418	122,794	130,019	125,719	1,170,060		
Money received in mail.....	\$641.00	\$856.50	\$516.33	\$838.10	\$366.00	\$785.27	\$3,376.35	\$1,315.96	\$2,174.55	\$4,754.73	\$5,482.25	\$2,754.40	\$20,154.33		
Postage stamps received in mail.....	1,530	891	699	716	783	964	956	689	1,170	754	762	784	10,068		
MISCELLANEOUS.															
Number of foreign letters sent (postage prepaid).....	71	52	69	78	77	215	319	159	191	203	229	169	1,832		
Total number of pieces received for the year.....	341,451	601,657	353,621	328,511	297,428	372,240	472,519	440,094	504,438	582,451	507,060	533,094	5,375,120		
Total number of letters sent out for the year, and cards.....	190,915	103,805	177,044	463,436	324,992	456,609	443,194	309,545	390,418	334,261	347,425	325,096	3,526,491		
Calls on Adjutant-General sent (not included in letters sent).....	11,261	9,631	8,165	11,010	12,260	20,999	42,795	38,944	42,354	39,441	41,158	60,605	231,532		
Blanka sent (not included in letters sent).....	13,299	6,880	2,164	1,851	2,167	1,991	2,083	1,516	2,545	1,698	1,995	1,495	29,152		

* This includes duplicates.

TABLE NO. 22.—Names of surviving widows of Revolutionary soldiers who have been regularly paid their pensions to June 4, 1891, with their ages and places of residence at that date.

Name.	Age.	Name of soldier.	Service of soldier.	Town.	County.	State.
Aldrich, Lovey	91	Aldrich, Caleb	New Hampshire and Rhode Island troops	Seattle	King	Washington.
Betz, Elizabeth	89	Betz, Peter	Pennsylvania troops	Harrisburg	Dauphin	Pennsylvania.
Brown, Mary	86	Brown, Joseph	do	Knoxville	Knox	Tennessee.
Cloud, Nancy	78	Cloud, William	do	St. Paul	Carroll	Virginia.
Dabney, Sarah	91	Dabney, John Q	do	Barry	Wake	Illinois.
Damon, Esther S	77	Damon, Noah	Massachusetts troops	Blymouth Union	Windsor	Vermont.
Dummore, Jane	90	Merrill, James	Connecticut troops	Napoleoni	Fulton	New York.
Green, Nancy A	73	Edens, Elias	South Carolina troops	Brooklyn	Richmond	Illinois.
Heath, Lucy	86	Heath, Nathaniel	New York troops	Brooklyn	Richmond	Illinois.
Heath, Sally	73	Heath, William	North Carolina troops	Brooklyn	Richmond	Illinois.
Jones, Nancy	77	Weeks, Elijah	Massachusetts troops	Brooklyn	Richmond	Illinois.
Lockwood, Betsey	78	Darling, James	Connecticut troops	Brooklyn	Richmond	Illinois.
Mayo, Rebecca	80	Mather, Joseph	New York troops	Brooklyn	Richmond	Illinois.
Morton, Olive C	90	Mayo, Stephen	Connecticut troops	Brooklyn	Richmond	Illinois.
Morse, Lucy	90	Tuman, Peter	New York troops	Brooklyn	Richmond	Illinois.
Rains, Nancy	90	Morse, Abial	Connecticut troops	Brooklyn	Richmond	Illinois.
Richardson, Patty	90	Rains, John	Virginia troops	Brooklyn	Richmond	Illinois.
Smith, Merdy	80	Richardson, Godfrey	New York troops	Brooklyn	Richmond	Illinois.
Snead, Mary	75	Smith, William	North Carolina troops	Brooklyn	Richmond	Illinois.
Turner, Asenath	86	Snead, Bowdoin	Virginia troops	Brooklyn	Richmond	Illinois.
Weatherman, Nancy	81	Durland, Samuel	Connecticut troops	Brooklyn	Richmond	Illinois.
Young, Anna Maria	99	Glascok, Robert	Virginia troops	Brooklyn	Richmond	Illinois.
		Young, Jacob	Pennsylvania troops	Brooklyn	Richmond	Illinois.

* Daughters pensioned by special act.

PENSIONS AND PENSION APPEALS.

DEFECTS IN PENSION LEGISLATION.

My attention has been drawn to several defects in pension legislation the importance of which should entitle them to the consideration of Congress; and, with that object in view, I respectfully submit them to you. For instance, from an early date in the history of our pension system, there have prevailed, under different administrations, conflicting opinions as to the power to enforce the reimbursements of money paid in *excess* for pensions in conformity with either inaccurate or illegal certificates issued through mistakes either of fact or of law in the adjudication of claims by the Bureau of Pensions; and consequently, in the absence of a clear legal provision on the subject, the Government, having no authority to plead a past overpayment as an offset to current payments of pension, has been compelled to submit to serious losses of money which, having been once improperly paid either to claimants or to pensioners, were irrecoverable under any established rule of departmental practice. A memorable illustration of this fact was given in a large number of applications for *rerating* and for *increase* that were filed in the Bureau of Pensions during the years 1887, 1888, and 1889, upon which considerable sums of money were paid improperly to certain pensioners by the authority of the Commissioner, in violation of both law and practice, but without either the knowledge or the consent of the Secretary—losses for which there should have been a

REIMBURSEMENT

of the Treasury, under the same law in pursuance of which the pension itself was granted. The means employed, whether by claimants or by attorneys, to procure these excessive allowances will not be here discussed; but the evil itself confronts the Department, and the need for a legal remedy is emphasized not only by considerations of justice to the great mass of honest pensioners, but by the proper requirements of the pension system. It is equivalent in its effect to a discrimination in favor of unlawful claims and claimants. In order to supply a remedy, I respectfully recommend that Congress be requested to enact a law that shall expressly authorize the Department to treat all improper, illegal, and *excessive* payments of pension, whether caused by *fraud* or by *mistake*, as *prepayments* to be charged against the current pension, with a view to readjusting or equalizing current pension payments within the discretion of the Secretary. Such an enactment would afford a prompt and, I believe, an effective remedy for the evil under consideration, at the same time averting all occasion for departmental controversy or for litigation with pensioners. It would confer upon the Department the power to correct its own errors by a just and easy process, thereby preserving the integrity of the law and maintaining the fairness with which it should be enforced.

WIDOWS' DISABILITY PENSION.

The first clause of section 3 in the act of June 27, 1890, provides that—

If any officer or enlisted man who served ninety days or more in the Army or Navy of the United States during the late War of the Rebellion, and who was honorably

discharged, has died or shall hereafter die, leaving a widow without other means of support than her daily labor, or minor children under the age of sixteen years, such widow shall, upon due proof of her husband's death, without proving his death to be the result of his Army service, be placed on the pension roll from the date of the application therefor under this act, at the rate of eight dollars per month during her widowhood, and shall also be paid two dollars per month for each child of such officer or enlisted man under sixteen years of age, etc.

In the list of applications for widows' pension under this section of the act of June 27, 1890, my attention has been drawn to a number of cases wherein, according to the law, the claimant has been necessarily denied pension because the soldier, on whose death the claim was based, although serving "ninety days or more in the Army or Navy," as shown by the evidence, had not been "honorably discharged" prior to death, but had died while, for instance, on individual furlough and absent from the technical line of duty in the service. It seems that both the spirit and the object of the act of June 27, 1890, would be emphasized and subserved by an amendment of this section that would be applicable to such meritorious cases of dependence and distress; and I respectfully urge that such an amendment be adopted by Congress. In this connection, I respectfully renew a suggestion, which I had the honor to submit in my report for October 1, 1890, wherein, referring to the *proviso* in the third section of the act of June 27, 1890, which provides

PENSION FOR MINOR CHILDREN

who are "insane, idiotic, or otherwise permanently helpless," I said :

The clause properly provides that the pension granted to such children shall continue during the life of said child, or during the period of such disability; but, under the law as it stands, in order that such children shall be pensioned during life, or during the period of such disability, it must appear that the father or the mother died *prior to the expiration* of the limit affixed to the pensionable minority period, viz, *sixteen year of age*; and, therefore, if, when the parent dies, the insane, or idiotic, or otherwise permanently helpless child is *more* than instead of *under sixteen years of age*, a minor's pension can not be allowed. In view of this fact I respectfully suggest that the act should be so amended as to admit all insane, idiotic, or otherwise permanently helpless children to minors' pension, regardless of the date or the parent's death or remarriage, at any period *prior to and including the age of twenty-one years*.

The amendment here suggested would be in keeping with the beneficent purposes of the act of June 27, 1890. It would reach a considerable number of cases for which the pension system has thus far made no provision, and it would necessitate only a small additional expenditure of money per annum. The experiences of the past year impel me now to further suggest that, in cases of "insane, idiotic, or otherwise helpless children" of deceased pensioners, the pensionable *age-limit* be abolished so as to admit such children at any date to the pension roll. An evil of serious magnitude has resulted from the practice of pensioning a certain class of

INSANE INMATES OF THE GOVERNMENT HOSPITAL

located in the District of Columbia. This class consists of persons who, having been admitted to the hospital for care and treatment at the expense of the Government, but having neither wife nor child nor living parent dependent on them for support, and having no other relative near enough to occupy on their account a pensionable status, are nevertheless pensioned for insanity, the pension money being paid quarterly to a guardian. My attention has been called to a number of instances wherein such persons remained in the hospital many years

prior to the appointment of a guardian, and then said appointment would appear to have been instigated by either some friend or remote relative of the person with a view to filing an application and obtaining the payment of large *arrears* of pension on account of the alleged disability. Thus, without either his knowledge or consent, the inmate of the hospital, having no dependent relative legally entitled to pension is made the unwitting subject or means of a speculative claim, the benefits of which he can never enjoy and the use of which he can never control. The inmate at last dies, leaving in the hands of the guardian a large sum of pension money, constituting a personal estate, which goes perhaps to some heir of the decedent for whom the pension system was not intended either directly or indirectly to provide. The extent to which has been carried this method of obtaining money is an abuse that should not be longer tolerated in the name of pension.

You are aware that the Government has made the amplest and the best provision in the aforesaid hospital for the care and treatment of its inmates—the indigent class receiving such care and treatment free of charge, while the charges made against those who are *not* indigent are merely nominal. In view of these facts I respectfully but urgently recommend that the class of inmates to which reference has now been made be declared by Congressional enactment to be *nonpensionable for the period during which they receive the care and treatment of the hospital*, the only pensionable class being restricted to those who have wives or children or other pensionably dependent relatives, to whom the inmate's guardian shall pay, under the orders of a court having competent jurisdiction, all the current pension in excess of the nominal charges for care and treatment of the pensioner as shall be shown in the accounts rendered by the hospital's superintendent. A moment's reflection makes it obvious that the pension system was never designed as the means of procuring money for the ultimate maintenance or enjoyment of persons who have no direct, nor immediate, nor legitimate title to its benefactions, but who intentionally pervert the apparent needs of the insane soldier into an opportunity for speculating in pensions. The enactment of such a law as I have here suggested will aid in protecting the Treasury against unworthy claimants and, to that extent, confine the annual appropriation for pensions to those who are fairly entitled to its benefits. The Government can afford to generously care for its indigent insane veterans, but it should not be required to enrich for a mere pretext the nonpensionable "heirs" of the demented soldier.

PERIODICAL AID AND ATTENDANCE.

Reviewing the experiences of the past year in adjudicating pension appeals, I am impressed with the value of a recommendation that was submitted by the honorable Commissioner of Pensions in his annual report for 1890 favoring a just provision of law "to create a higher rate than \$30 per month" for cases wherein claimants are shown to be "incapacitated for performing manual labor and who *periodically* require the aid and attendance of other persons, but who are unable to establish the fact of the requirement of *constant* aid and attendance." Since the passage of the act of March 4, 1890, amending the acts of June 18, 1874, and June 16, 1880, and increasing the rate for a disability requiring the "constant aid and attendance of another person" from \$50 to \$72 per month, there has been no *intermediate* rate between \$30 as provided by the act of March 3, 1883, for total incapacity for manual labor, and that of \$72 per month under the aforesaid act of March 4, 1890. The

wide gap existing between these two rates leaves a worthy though not numerous class of claimants without adequate provision; and I recommend that such provision be promptly made for the sake of justice and equality before the law, fixing the intermediate rate at \$50 per month for the cases described.

THE ACT OF MARCH 3, 1877.

Among the inequalities that appear here and there in pension legislation is a provision contained in the act of Congress approved March 3, 1877, amending the pension laws so as to remove the legal disability of those who, having participated in the rebellion, have, since its termination, enlisted in the *Army* of the United States and become thereby disabled. The act provides that—

The law prohibiting the payment of any money on account of pensions to any person or to the widow, children, or heirs of any deceased person, who, in any manner, engaged in or aided or abetted the late rebellion, shall not be construed to apply to such persons as *afterward* voluntarily enlisted in the *Army* of the United States and who, while in such service, incurred disability from a wound or injury or disease contracted in the line of duty.

In the administration of this act it has been customarily held by the Department to be inapplicable to *Navy* cases, inasmuch as it contains no express provision for enlistments in the *Navy*. The opinion is entertained that, with reference to any person who, in any manner, engaged in or aided or abetted the late rebellion, it was, in fact, intended that the act should apply to all "such persons as afterward voluntarily enlisted in [*either the Navy or*] the *Army* of the United States, and who, while in such service, incurred disability from a wound or injury, or disease contracted in the line of duty;" and the absence of the words necessary to make the act applicable to *Navy* cases has been reasonably ascribed to an oversight in phraseology on part of Congress when formulating the act itself. Whether this opinion be correct or not, it is obvious that the act furnishes a technical ground of discrimination against the naval service and against disabilities incurred in and by reason of said service—a discrimination that is inconsistent with the object of the pension system and for which no sound reason has been ever given. It can not be justly held that disabilities incurred in the line of duty in the *Army* should be pensionable, but that similar disabilities, if incurred in the line of duty in the naval service, should *not* be pensionable. The grounds for pension are certainly applicable to both cases alike, and I respectfully recommend that the act of 1877 be so amended as to expressly remove the invidious discrimination and put all *Navy* and *Army* cases upon a footing of exact equality before the law. Justice to a number of patriotic men, to their wives and children, requires this to be done.

DECISIONS IN PENSION CLAIMS.

Since submitting to you my former report, the fourth volume of decisions in pension claims, embracing opinions rendered in selected cases, has been published in a substantial form, and it is being distributed by the superintendent of documents for the Department of the Interior at a nominal charge per copy. The high value of these volumes in establishing uniform and consistent departmental rulings governing the administration of the pension laws and correcting misinterpretations of the statutes is generally conceded, the rapidity with which the editions are sold indicating the acceptability of the rulings

themselves. They furnish, also, the best evidence of the thoroughness with which appeals in pension cases are considered, showing the impartial and faithful endeavor which is made by the Board of Appeals to accurately construe the law and insure justice to every class of claimants.

The work thus done is fulfilling the beneficent purpose of the nation, expressed a century ago, when making the pledge that, "if any person, whether officer or soldier, belonging to the militia of any State and called into the service of the United States, be wounded or disabled while in actual service, he shall be taken care of and provided for at the public expense." The fidelity with which that pledge has been redeemed is indicated by the fact that, in compliance with the provisions of various pension laws, there were, on June 30, 1891, the names of 676,160 pensioners borne on the pension rolls, that number including 138,216 more pensioners than were carried on the same rolls at the end of the preceding fiscal year.

Respectfully,

Hon. JOHN W. NOBLE.

CYRUS BUSSEY,
Assistant Secretary.

REPORT OF THE SUPERINTENDENT OF CENSUS

FOR THE SIX MONTHS ENDING DECEMBER 31, 1890.

SIR: The rapidity with which the work of taking the Eleventh Census is being brought to a termination and the satisfactory progress made during the last six months of the year have justified the preparation of a special report relative to the operations of the office covering the portion of the year from July 1 to December 31, 1890. This period, as you know, has been by far the most active in census matters, and already the work is sufficiently advanced to admit of further reduction in the office force. The field work of the Eleventh Census is practically finished. Nearly all the supervisors and four-fifths of the enumerators have been paid. The special agents engaged in abstracting mortgages in every county in the country have completed their work, and the returns are in course of tabulation. A few special agents may be found here and there gathering the fag-ends of information relating to mines and mining, while there are a few districts on the Pacific coast which have not yet been covered by the special agents collecting fish statistics. The collection of the statistics of manufactures for cities and towns withdrawn from the enumerators was not begun until after the count of the population. In some of the larger cities this work is in progress, but it has been completed in nearly all the smaller towns. The returns thus far received justify the conclusion that the statistics showing our industrial progress will be more complete and satisfactory in every way than I had a right to expect.

In short, the work of every division has been held strictly within the scope of the plan which I had the honor to lay before you in the spring of 1889, and which met with your official approval. Every attempt, no matter how tempting, on the part of special agents and experts to enlarge or add new inquiries has been promptly met with refusal, and I am looking forward to the completion of the census within two years from this date. It is hoped that the cost of the census of 1890 will not exceed the original appropriation made by Congress to defray the expenses of the Eleventh Census. The utmost care has been exercised

in every branch of the work and the usual waste attending such an undertaking reduced to a minimum. The working force of the office from the beginning has been of a high grade of efficiency, and deserves great credit for capacity, faithfulness, and industry.

THE COUNT OF THE PEOPLE.

I had the honor to transmit to you the official count of the population of the United States as finally determined November 26, which was as follows:

The United States.....	62,622,250	Missouri.....	2,679,184
Alabama.....	1,513,017	Montana.....	132,159
Alaska.....		Nebraska.....	1,058,910
Arizona.....	59,620	Nevada.....	45,761
Arkansas.....	1,128,179	New Hampshire.....	376,530
California.....	1,208,130	New Jersey.....	1,444,933
Colorado.....	412,198	New Mexico.....	153,593
Connecticut.....	746,258	New York.....	5,997,853
Delaware.....	168,493	North Carolina.....	1,617,947
District of Columbia.....	230,392	North Dakota.....	182,719
Florida.....	391,422	Ohio.....	3,672,316
Georgia.....	1,837,353	Oklahoma.....	61,834
Idaho.....	84,385	Oregon.....	313,767
Illinois.....	3,826,351	Pennsylvania.....	5,258,014
Indiana.....	2,192,404	Rhode Island.....	345,506
Indian Territory.....		South Carolina.....	1,151,149
Iowa.....	1,911,896	South Dakota.....	328,808
Kansas.....	1,427,096	Tennessee.....	1,767,518
Kentucky.....	1,858,635	Texas.....	2,235,523
Louisiana.....	1,118,587	Utah.....	207,905
Maine.....	661,086	Vermont.....	332,422
Maryland.....	1,042,390	Virginia.....	1,655,980
Massachusetts.....	2,238,943	Washington.....	349,390
Michigan.....	2,093,889	West Virginia.....	762,794
Minnesota.....	1,301,826	Wisconsin.....	1,686,880
Mississippi.....	1,289,600	Wyoming.....	60,705

The population of the United States on June 1, 1890, as shown by the final count of persons and families, exclusive of white persons in Indian Territory, Indians on reservations, and of Alaska, was 62,622,250. Including these persons the population will probably exceed 63,000,000. In 1880 the population was 50,155,783. The absolute increase of the population in the ten years intervening was 12,466,467, and the percentage of increase was 24.86. In 1870 the population was stated as 38,558,371. According to these figures the absolute increase in the decade between 1870 and 1880 was 11,597,412 and the percentage of increase was 30.08.

THE APPORTIONMENT OF REPRESENTATIVES IN CONGRESS.

I have also the honor to call your attention to the fact that the apportionment of Representatives in Congress was not delayed a moment by the failure of the Census Office to have the official returns of the population ready on the convening of Congress. The passage by the House of Representatives of the apportionment bill, for the first time in the history of the country, the same year the census was taken makes it worth while briefly to review the apportionment legislation. Numerous inquiries have been addressed to the Census Office on the subject, and I take this method of answering them.

The following table shows what may be termed the constitutional population of the United States, the present number of Representatives, and the number of Representatives provided for by the act which passed the House of Representatives December 17, 1890:

States.	Constitutional population.	Present number of members.	Number as proposed.	States.	Constitutional population.	Present number of members.	Number as proposed.
Total	\$1,908,000	332	356	Missouri.....	2,679,184	14	15
Alabama.....	1,513,017	8	9	Montana.....	132,159	1	1
Arkansas.....	1,128,179	5	6	Nebraska.....	1,058,910	5	6
California.....	1,208,130	6	7	Nevada.....	45,761	1	1
Colorado.....	412,198	1	2	New Hampshire.....	376,530	2	2
Connecticut.....	746,253	4	4	New Jersey.....	1,444,903	7	8
Delaware.....	168,493	1	1	New York.....	5,997,853	34	34
Florida.....	391,422	2	2	North Carolina.....	1,617,947	9	9
Georgia.....	1,837,353	10	11	North Dakota.....	182,719	1	1
Idaho.....	84,385	1	1	Ohio.....	3,672,316	21	21
Illinois.....	3,826,351	20	22	Oregon.....	313,767	1	2
Indiana.....	2,192,404	13	13	Pennsylvania.....	5,258,014	28	30
Iowa.....	1,911,896	11	11	Rhode Island.....	345,506	2	2
Kansas.....	1,427,096	7	8	South Carolina.....	1,151,149	7	7
Kentucky.....	1,858,635	11	11	South Dakota.....	328,808	2	2
Louisiana.....	1,118,687	6	6	Tennessee.....	1,767,518	10	10
Maine.....	661,086	4	4	Texas.....	2,235,523	11	12
Maryland.....	1,042,390	6	6	Vermont.....	332,422	2	2
Massachusetts.....	2,238,043	12	13	Virginia.....	1,655,980	10	10
Michigan.....	2,093,889	11	12	Washington.....	349,390	1	2
Minnesota.....	1,301,826	5	7	West Virginia.....	762,794	4	4
Mississippi.....	1,280,600	7	7	Wisconsin.....	1,686,880	9	10
				Wyoming.....	60,705	1	1

The apportionment of Representatives in Congress, according to the enumeration of the First, Second, Third, Fourth, Fifth, Sixth, Ninth, and Tenth Censuses, was made by Congress. At the first six apportionments Congress set forth the ratio of population for each member allowed, and also at each apportionment fixed the total number of members of the House.

The law for the taking of the Seventh Census was intended to be permanent (act of May 23, 1850, 9 Stat., 428). It presented a rule of apportionment, fixed the number of members of the House at 233, and directed the Secretary of the Interior to make the apportionment to each State thereafter, which was done for that and the next apportionment.

The apportionment under the Eighth Census was made under this law, but Congress, on March 4, 1862, fixed the total number of members at 241, and the Secretary of the Interior apportioned the quotas to the States. The ninth and tenth apportionments were made by Congress; hence it may be assumed that the power conferred on the Secretary of the Interior by the act of May 23, 1850, has been repealed by implication. Heretofore all apportionments have been made at the long sessions of Congresses, being the second session after each census year, but early enough for the election of Representatives to the next ensuing Congress. If the apportionment bill, which has passed the House of Representatives, should pass the Senate and become a law, the apportionment under the Eleventh Census would be about two years earlier in time than any heretofore made.

These are the facts regarding previous censuses:

The Constitution, article I, section 2, made the first apportionment, fixing the number of Representatives for each State on the ratio of one representative for every 30,000 souls—in all 65 Representatives.

APPORTIONMENT ACCORDING TO CENSUSES.

FIRST CENSUS.

The act of April 14, 1792 (1 Stat., 253), on the ratio of one member for 33,000 souls, fixed the number of Representatives for each State (in all 105) to take effect after March 3, 1793.

SECOND CENSUS.

The act of January 14, 1802 (2 Stat., 128), on the ratio of one member for 33,000 souls, fixed the number of Representatives for each State (in all 141) to take effect after March 3, 1803.

THIRD CENSUS.

The act of December 21, 1811 (2 Stat., 669), on the ratio of one member for 35,000 souls, fixed the number of Representatives for each State (181 in all) to take effect after March 3, 1813.

FOURTH CENSUS.

The act of March 7, 1822 (3 Stat., 651), on the ratio of one member for 40,000 souls, fixed the number of Representatives for each State (in all 213) to take effect after March 3, 1823.

FIFTH CENSUS.

The act of May 22, 1832 (4 Stat., 516), on the ratio of one Representative for 47,700 souls, fixed the number of Representatives for each State (240 in all) to take effect after March 3, 1833.

SIXTH CENSUS.

The act of June 25, 1842 (5 Stat., 491), on the ratio of one Representative for each 70,680 souls, fixed the number of Representatives for each State (223 in all) to take effect after March 3, 1843, and the act allowed an additional Representative to each such State as had a population of a fraction greater than a moiety of said ratio. This act also required that the Representatives be elected in districts composed of contiguous territory, and interesting debates are reported in the "Globe" on this apportionment.

All the foregoing six apportionments were made by Congress. The following two, to wit, the seventh and eighth, were made by the Secretary of the Interior under the provisions of the census act of May 23, 1850 (9 Stat., 428-432).

SEVENTH CENSUS.

The Secretary of the Interior, under the provisions of the act of May 23, 1850, made the apportionment of Representatives for each State, the act having limited the number of Representatives to 233 after March 3, 1853, the date said apportionment took effect. That act, sections 25 and 26, prescribed the mode of ascertaining the ratio of population.

EIGHTH CENSUS.

Under the provisions of the same act of May 23, 1850, the Secretary of the Interior made the apportionment, the act of March 4, 1862 (12 Stat., 353), having limited the number of Representatives to 241 after March 3, 1863, the date said apportionment took effect.

NINTH CENSUS.

The act of February 2, 1872 (17 Stat., 28), did not set forth a ratio of population for a Representative, but it fixed the membership of the House after March 3, 1873, at 283 members, and apportioned them to the States.

TENTH CENSUS.

The act of February 25, 1882 (22 Stat., 5), did not set forth a ratio of population for a Representative, but it fixed the membership of the House after March 3, 1883, at 325 members, and apportioned them among the States. This act provides for members from new States, and as to how elections shall be held at large for States cut down in number of Representatives, or at large for the members a State may have gained by the apportionment.

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PAPERS ACCOMPANYING THE
FINANCIAL REPORT.

The total disbursements on account of the Eleventh Census of the United States from the commencement of operations up to and including December 31, 1890, amounted to \$4,810,204.69. The total is chargeable to branches of investigation as follows:

Census proper	\$388,350.65
Printing and stationery	334,830.98
Supervisors	238,457.35
Enumerators	1,901,432.00
Population and social statistics	415,669.60
Manufactures	255,457.16
Agriculture	47,835.73
Vital statistics and special classes	121,590.82
Wealth, debt, and taxation	131,057.22
Farms, homes, and mortgages	610,813.50
Mines and mining	140,719.81
Fish and fisheries	90,412.32
Transportation	64,260.62
Insurance	31,880.56
Churches	19,170.74
Pauperism and crime	18,265.63
	4,810,204.69

The following table gives the total number of clerks carried on the pay roll for each month since the date of my last report, and is a continuation of the table on page 14 of that report:

Months.	Total number on pay rolls.	Total amount of pay rolls.
July, 1890	1,812	\$110,717.20
August, 1890	2,115	136,075.75
September, 1890	2,212	146,318.10
October, 1890	2,238	155,214.45
November, 1890	2,184	152,537.35
December, 1890	2,161	154,798.45
Total		855,659.40
Total to June 30, 1890		409,942.15
Grand total to December 31, 1890		1,205,601.55

EMPLOYÉS AND EXAMINATIONS.

The Census Office reached its maximum number of employés in October, the November pay roll showing a slight decrease. From this time on there will be a decrease in the total number of employés. As no more appointments are to be made, the work of the examining board is practically terminated. This board has examined 2,191 candidates for appointment and re-examined 150, equivalent to 2,341 examinations.

CENSUS PRINTING OFFICE.

During the period from July 1 to the date of this report twice the amount of work has been done in the Census Printing Office than in the entire preceding period since its organization. Under 820 requisitions 11,220,529 copies have been printed, at a cost of \$17,885.90. Adding the number of copies printed up to July 1, 1890, 5,911,805, gives a total number of copies printed at the Census Printing Office to date of 17,132,334.

VETERANS.

The schedules returned by the enumerators relating to veterans have been carefully examined, and the work of counting the entries of the names of soldiers, sailors, and others, with their records of service, is approaching completion.

The results of this preliminary count will establish the thoroughness of the canvass made by the census enumerators, as well as afford a basis for determining to what extent and in what direction supplementary work of the same character must be done. The methods to be pursued in the verification of the records of service and in supplying data omitted or incorrectly stated by the census enumerators require most careful consideration before their final adoption, so that no very definite statement can be made just at present as to the probable requirements of this branch of the work or as to just what steps ought to be taken in its prosecution. The system once established, however, this work becomes largely a matter of detail, requiring careful and methodical treatment and the employment of every means possible to insure accurate results, and, above all things, that the printed reports shall contain the names and residences, and, so far as possible, a verified statement as to the service of every surviving soldier, sailor, and marine who was mustered into the service of the United States during the late war, together with the names and residences of the widows of such as have died, accompanied by the records of the service of their deceased husbands in all cases where obtainable. It was hoped that the additional compensation provided by Congress for enumerating each soldier, sailor, etc., would have resulted in making the returns full and complete. The difficulty, however, of obtaining the required information from anyone excepting the persons themselves has proved to be so great that while it may be reasonably expected that the population schedule will contain a fairly complete list of all the veterans and widows of veterans, it will be necessary to supplement the work to a very great extent by direct correspondence from this office. It may be observed, in this connection, that the willingness on the part of veterans to furnish this information is likely to facilitate the work, and ultimately to perfect the records.

METHODS OF TABULATION.

The experience of six months has demonstrated that for the purpose of counting large numbers expeditiously as well as accurately the Hollerith method of tabulation, which has been adopted by the Census Office, has proved to be a success. Within less than two months the entire population of the country was counted twice.

While the inventor claimed for his system that 10,000 cards could be counted or sorted by a clerk in one day, it has been found that one clerk has actually counted 15,534 cards in one day of six and a half hours, while another has counted 15,289 cards, and a third has sorted 19,500 cards.

* * * * *

EDUCATIONAL STATISTICS.

The work of this division is well advanced. In addition to the bulletin just issued, giving the enrollment in the public schools of Louisiana, New Hampshire, and Wisconsin, the reports or summaries are in hand for the public schools of some fifteen States and Territories.

Reports from other States are promised at dates extending to April 1, 1891. Nearly 7,000 private schools and over 4,500 parochial schools have reported. With facilities for prompt printing, some five bulletins can be issued during the preparation of the final report to advantage, according as returns of attendance and illiteracy are ready. Much correspondence is yet necessary, as well as the classification and tabulation of information.

FARMS, HOMES, AND MORTGAGES.

The work accomplished by this division up to date may be briefly stated as follows:

Number of counties in which complete abstracts have been made	2,777
Number of counties in which abstracting is yet unfinished	5
Total number of counties in the United States	2,782
Number of counties in which supplemental work must be done owing to incompleteness of abstracters' returns	17
Number of mortgages for which abstracts have been made	8,874,860
Estimated number of mortgages for which abstracts are yet to be made in counties that are not to be re-abstracted	18,000
Number of mortgages recorded in the United States during the ten years ending December 31, 1889, rough count and estimated	8,892,860
Number of inquiry counties in which investigation has been completed ..	97
Number of inquiry counties in which investigation is yet to be completed ..	7
Total number of counties computed for average life	1,469
Total number of counties sorted	1,044
Total number of counties transferred to result slips	208

Bulletins for Alabama and Iowa are now in the hands of the printer.

The information in regard to the following points will be called for by the farm and home schedule prepared in accordance with the provisions of the act of February 22, 1890: Whether the incumbrance was a crop lien; amount of incumbrance unpaid June 1, 1890; value of the farm or home; actual rate of interest; object of the indebtedness.

A force of clerks is now engaged copying from the population schedules names of persons whose homes and farms are reported as mortgaged. To these persons schedules are being sent asking for the above information. As I have already said, within a few months the Census Office expects to announce the number of persons in the United States living in rented homes and cultivating rented farms; the number occupying their own homes and farms free from debt, and the number reported as owning farms and homes which are mortgaged. While the facts obtained by this investigation will throw a new light upon the subject of mortgage indebtedness, and while the material gathered bids fair to be far more complete and far more reliable than I had ever hoped, the cost of the inquiry has been great, and will fully reach my original estimate of \$1,250,000 to \$1,500,000. At the time the law relating to the collection of the statistics of mortgage indebtedness was passed I called the attention of the census committees of both Houses of Congress to the probable cost of the work. While every effort has been made to conduct the work as economically as possible, the expense has been enormous. Some idea of the obstacles to be overcome was given in my annual report.

ROBERT P. PORTER,
Superintendent of Census.

THE SECRETARY OF THE INTERIOR.

REPORT OF THE SUPERINTENDENT OF CENSUS

PRELIMINARY PRINTING.

The number of copies printed since the beginning of the Eleventh Census is about 135,000,000, of which some 20,000,000 were envelopes (properly classed as stationery).

The census printing office, authorized under the act to provide for taking the Eleventh and subsequent censuses, has fully demonstrated the wisdom of its establishment. About 35,000,000 copies of circulars, tally sheets, bulletins, etc., have been printed at this office since its establishment.

An immense number of tabulation sheets used by the Census Office were printed and ruled here, not one having been done elsewhere for more than a year. Since January 1, 1891, the number of these sheets aggregated 725,000, and, counting each ruling necessary as one separate sheet, this number really represents 1,925,000 sheets. Some of these ruled sheets had to be passed through the machine fifteen times before being complete.

All the population bulletins and a majority of those on special subjects were printed in this office.

This enormous mass of preliminary printing (including, as it does, schedules, circulars, postal cards, etc.) was handled by the printing and stationery division without an error of moment, and it is, in my opinion, in great measure due to the efficient work thus performed that the work of the Eleventh Census is so far advanced.

Besides the labor required to handle the printing of the Eleventh Census, this division has charge of the stationery and supplies, and too much praise can not be awarded those in charge of this important branch of the work for the excellent manner in which it has been conducted.

ROBERT P. PORTER,
Superintendent of Census.

THE SECRETARY OF THE INTERIOR.

ANNUAL REPORT OF THE COMMISSIONER OF PATENTS.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., July 31, 1891.

SIR: I have the honor to submit the following report of the business of this office during the fiscal year ending June 30, 1891.

The following statement, prepared in the usual condensed form, exhibits the transactions in the office during the period specified, and compares them in important particulars with the corresponding transactions during four previous years. It also shows the balance now in the Treasury of the United States on account of the patent fund:

APPLICATIONS AND CAVEATS RECEIVED.

Applications for letters patent.....	39,696
Applications for design patents.....	1,146

Applications for reissue patents.....	111
Applications for registration of trade-marks.....	1,835
Applications for registration of labels.....	808
Caveats.....	2,333
Total.....	45,949

PATENTS GRANTED AND TRADE-MARKS AND LABELS REGISTERED.

Letters patent granted (including reissues and designs).....	25,307
Trade-marks registered.....	1,744
Labels registered.....	289
Total.....	27,340

PATENTS WITHHELD AND PATENTS EXPIRED.

Letters patent withheld for nonpayment of final fee.....	3,514
Letters patent expired.....	12,383

RECEIPTS AND EXPENDITURES.

Receipts from all sources.....	\$1,302,794.59
Expenditures (including printing and binding, stationery, and contingent expenses).....	1,145,502.90
Surplus.....	157,291.69

COMPARATIVE STATEMENT.

	Receipts.	Expenditures.
June 30, 1887.....	\$1,150,045.05	\$981,644.09
June 30, 1888.....	1,122,094.83	953,730.14
June 30, 1889.....	1,180,557.22	999,697.24
June 30, 1890.....	1,347,203.21	1,081,173.56
June 30, 1891.....	1,302,794.59	1,145,502.90

INCREASE IN THE NUMBER OF APPLICATIONS FOR PATENTS, INCLUDING REISSUES, DESIGNS, TRADE-MARKS, AND LABELS.

June 30, 1887.....	38,408
June 30, 1888.....	37,769
June 30, 1889.....	39,702
June 30, 1890.....	43,810
June 30, 1891.....	43,616

NUMBER OF APPLICATIONS AWAITING ACTION ON THE PART OF THE OFFICE.

July 1, 1887.....	7,601
July 1, 1888.....	7,227
July 1, 1889.....	7,073
July 1, 1890.....	6,585
July 1, 1891.....	8,911

BALANCE IN THE TREASURY OF THE UNITED STATES ON ACCOUNT OF THE PATENT FUND.

June 30, 1890.....	\$3,790,556.28
June 30, 1891.....	157,291.69
Total.....	3,947,847.97

It will be seen from the foregoing that the number of applications for patents increased at an almost phenomenal rate during the year ending June 30, 1890, and that substantially the same rate was kept up during the year last passed. During the two years the office has been called upon to consider and dispose of nearly ten thousand cases more than would have been considered if the number of applications had not ex-

ceeded the average (38,735) for the years 1888 and 1889. The additional duty thus imposed has borne heavily upon the examining force, and it is to its credit that without any increase in its numbers the number of cases on hand for action at the close of the fiscal year was so slightly in excess of that of the former year. It was in consequence of this addition to the work to be done by the Patent Office that in my report for the last fiscal year I asked for an increase in the examining corps and a corresponding increase in the clerical and laboring force, and directed attention to the fact that the pace kept up and rendered necessary by the very great increase in the number of applications for patents was inconsistent with the high degree of care in conducting examinations which the patent system calls for when properly administered. At the same time I expressed the opinion that the number of examining divisions should be increased from thirty to thirty-two, and that the additional force of examiners to equip the new divisions should include two principal examiners and at least fifteen assistant examiners in the various grades.

* * * * *

PATENT CENTENNIAL.

The present year has been rendered memorable by the celebration in this city of the beginning of the second century of the American patent system. The programme of exercises, as published in the Official Gazette for March 31, was carried out on the 8th, 9th and 10th days of April, substantially as announced, and will result, to an extent that can not now be measured, in a widespread and intelligent interest in all that concerns inventors and inventions.

Very respectfully, your obedient servant,

C. E. MITCHELL,
Commissioner.

The SECRETARY OF THE INTERIOR.

REPORT OF THE COMMISSIONER OF RAILROADS.

DEPARTMENT OF THE INTERIOR,
OFFICE OF COMMISSIONER OF RAILROADS,
Washington, D. C., November 1, 1891.

SIR: In compliance with the statutory requirements of the act creating this Bureau (20 Stat., 169, sec. 3) I have the honor to submit the following report in regard to the Bureau and its operations and of the condition of the property, business, and accounts of the several railroad companies coming under its supervision which have made such reports as have been called for under the law.

The operations of the railroads for the past year as reported to this office show a decided improvement as to the volume of business over the reports for several preceding years. Owing, however, to continually declining rates of traffic, brought about mainly by increased competition, the net earnings do not keep pace with the gross receipts. The net earnings of the bonded roads, in which the Government has a direct pecuniary interest, and from which earnings it looks for reimbursement for subsidies granted in aid of their construction, show a slight decrease from last year. The exact comparative figures are presented in tabulated form on other pages of this report.

The railroad prospects for the current year are especially gratifying. The crops in all sections of the country, and particularly in the West, are of unusual abundance. A more generally fruitful year has never been experienced. Mining, lumbering, and manufacturing operations have greatly increased and nearly all branches of business show an uncommon activity.

A careful inspection has been made of all the bonded and many of the land-grant roads during the past year by the engineer charged with that duty. His report to the Commissioner gives full details as to the physical condition of the various roads coming under the jurisdiction of this office. It will be found by a perusal of the engineer's report (Appendix No. 1) that the roads are being rapidly improved by replacing iron rails with steel, putting in stone and iron culverts and bridges in place of wooden ones, reducing grades, ballasting, building new and enlarging old machine shops, adding to terminal facilities, increasing and improving equipment, etc. These improvements, where they are made upon the bonded roads, are of especial value to the Government, as they not only increase the earning capacity of the roads, and thereby the amount of net earnings to be paid in liquidation of the Government debt, but they add largely to the value of the property, and so increase the Government security and render full final payment of the claims of the United States more certain.

The bookkeepers of this office have visited the headquarters of the various bonded roads and thoroughly examined their books of account so as to determine the exact sums due the Government. As under existing laws the bonded roads are required to pay to the Government a percentage of their net earnings, it is important to see that the net earnings are correctly ascertained and reported.

Under a recent decision of the United States Supreme Court (138 U. S. R., 84) it was held that in ascertaining net earnings upon which a percentage is to be paid to the United States, sums expended for betterments and improvements, whereby the capital of the roads is permanently increased, can not be regarded as current expenses to be deducted from the gross receipts in ascertaining net earnings. This decision was in reversal of a decision of the Court of Claims (20 C. Cls. R., 70) in which it was held that the sums expended for new construction and new equipment were in the nature of current expenses and might properly be deducted from the gross receipts in determining the amount of net earnings. It has always been the contention of this Bureau that the sums expended for betterments and improvements ought not to be deducted from the gross receipts in order to rightly ascertain the amount of net earnings, but the accounts have been made up under the decision of the Court of Claims referred to. The decision of the Supreme Court has made it necessary to restate the accounts of the bonded roads in so far as they come under the provisions of the Thurman act. The restatement dates from the time the act went into effect. By referring to this restatement, to be found upon another page, can be seen the amounts of gross earnings, the amounts of expenses properly deducted, the Government requirements and the payments made in satisfaction of them for each year since the passage of the Thurman act. It will be seen by the footings of this table that the Union and Central Pacific roads are in arrears up to December 31, 1890, the end of the calendar year for which settlements have been made, as follows: Union Pacific, \$525,060.49; Central Pacific, \$527,256.21. It is due, however, to the companies named to state that they have transportation accounts for services rendered the Government, now in the hands of the accounting officers of the

Treasury, in sufficient amounts to equal or exceed their apparent indebtedness. As a matter of fact, therefore, they have fully complied with the requirements of law. The constant increase in the debts due the Government from the bonded roads is not due to any failure of the railway companies to fully meet the Government requirements and to pay each year all that they are legally required to pay. The fault rests in the laws themselves. The percentage of net earnings required by law to be paid yearly, in discharge of the Government obligations, does not create a sum equal to the accruing interest on the subsidy bonds. Hence the debt increases yearly. What remedy can be applied to correct this unfortunate condition of affairs it is for the wisdom of Congress to determine.

This Bureau has frequently recommended the enactment of a law providing for the funding of the Government debts of the bonded roads. These recommendations have been approved by successive Secretaries of the Interior and Treasury Departments, and this plan of settlement was indorsed by President Cleveland in a message to Congress. No final legislative action has been had, although various bills have been submitted in each house of Congress and been fully discussed and considered. The Senate committee, through its chairman, Mr. Frye, reported unanimously in favor of the passage of a Senate bill, but no action was taken upon the report. The House committee was divided in its report, the majority favoring and a minority reporting against the passage of a bill. The bills in the two Houses were similar in their provisions. They provided that the time of payment of the Union Pacific indebtedness should be extended through a period of fifty years at 3 per cent interest, and the indebtedness of the Central Pacific extended through a period of seventy-five years at 2 per cent interest. The payments provided for were to be of fixed dates and amounts, represented by bonds maturing each six months for the periods named. In the case of each road it was provided that additional security be given for the payment of the bonds proposed to be issued in settlement of the Government indebtedness.

It was understood at the time of the introduction and consideration of these bills that they were satisfactory to the railway companies interested, and that if enacted into law the companies would accept the law and the debts be adjusted and funded in accordance with its provisions. The Union Pacific management changed hands after the last meeting of the stockholders, and I am informed by the new president that the bills I have referred to are not satisfactory to that company. It would be useless to pass any law looking to the settlement of their debts to the Government not approved by the companies interested, as it has been decided by the Supreme Court that the companies are not liable upon any part of their indebtedness until the maturity of the subsidy bonds. As to what terms of settlement, if any, the railway companies have to propose I am not advised. I am informed, however, that they desire a speedy settlement, providing for payments at fixed dates and amounts.

In view of the fact that the subsidy bonds are so soon to mature, rendering due the entire Government debt, principal and interest, it would seem to be important that Congress take early action in the matter. It is a vexed question to settle and there is no hope of its easier solution by delay. It will be useless to provide such conditions as will be impossible for the companies to perform. The Government should not only deal justly by itself but by the railroad companies as well,

and by the great commercial and other public interests with which they are so closely allied.

A careful study of the subject in all its relations and effects should be made before entering into any negotiations with a view to a definite settlement. If a harmonious and equitable adjustment can be had it would be in accordance with simple, practical business prudence. I would not consent to the weakening of any security which the Government now has for a full return of its advances. Whatever new arrangement, if any, shall be made the provisions of the present laws should be held in reserve to be enforced in the event of failure on the part of the companies to comply strictly with the new contract.

There ought to be no conflict between the United States and the owners of the bonded roads, and, in my judgment, there is no good reason why there should be. The Government has loaned its money and its credit and is entitled to its pay. The debtor companies acknowledge their obligations and profess to be anxious to cancel them as fast as possible without embarrassing their general business. Both parties desire a settlement and, by a proper effort, it seems certain that an equitable one may be effected. With the Government the time of payment is of little consequence, but security is everything.

I have little doubt of the ability of the principal bonded roads to eventually meet all their obligations to the Government, but the sum of their debts is apparently beyond possibility of payment in money at their maturity. Some plan of refunding must be devised in order to give them time. In fixing upon such a plan all the varied and complex questions surrounding the situation should be fully and fairly considered. The course of the Government should be that which any practical business man would pursue with a private debtor in a similar situation. An estimate should be made of the debtor's property and business, and thus should be ascertained what installments and at what times he could be reasonably expected to pay. It is of the first importance to the Government, simply in its relations as a creditor, to see that no action is taken that will result in hindering the conduct and development of the business or injuring the credit of the companies indebted to it, for in so doing it would impair the value of the securities upon which it depends for reimbursement.

The lien of the Government should remain paramount and unaffected by any event and strengthened whenever possible, but under that condition the companies should be allowed the fullest liberty to improve and extend their systems, so that thereby they might meet all competition and contingencies and be as free as their rivals to occupy new territory, secure important connections, and thus protect and increase their revenues. I am sure that a prudent business man, in estimating what extension of time should be given and fixing the amounts to be paid, would consent to such reasonable conditions and allow such margins as would permit his debtor to profitably continue his business. The Government, in its capacity as a creditor of the Pacific railroads, should be careful to see that the relations of creditor and debtor, as usually understood, be observed and maintained. Justice and expediency unite in suggesting this line of action.

It is the especial province of this Bureau to look after the physical and financial conditions of the railroads coming under its supervision, and particularly to see that the bonded roads pay annually into the Treasury of the United States such sums as, under existing laws, will meet the Government requirements.

Congress in its wisdom may profitably consider the relations existing between the Government and the Pacific railroads in a broader sense than the simple relation of debtor to creditor. Very many good reasons can be given showing why the greatest public good will not be attained by insisting that the bonded roads must pay these Government debts in the shortest period of time possible. I have already said, and the proposition seems indisputable, that any legislation tending to hamper the needed improvements or extensions of the roads and cripple their business would reduce their values and impair the Government security. But that would not be the worst result flowing from too restrictive legislation. If too stringent terms of payment are insisted upon they can only be complied with by the companies neglecting to make all needed improvements and extensions on their lines and withholding all dividends from stockholders, or by levying extortionate rates of transportation upon their traffic. In no other ways could the companies meet the obligations imposed upon them. Sensible men will hardly wish to see either of these expedients resorted to.

The Pacific railroads, with their numerous collateral lines, traverse vast empires in their extent. They already reach, or are projected into, States and Territories in which are contained all the resources from the development of which flows individual and national prosperity and wealth. These railroad companies were given their immense subsidies of moneys and lands not only that a great transcontinental route might be established but that the unsettled and inaccessible regions along their proposed lines might be profitably developed. Great as were the advantages derived by the Government and the people through having railroad connection established at so early a date between the Atlantic and the Pacific oceans, yet infinitely greater benefits have accrued from the opening of the farms and forests and mines that now pour their wealth into the channels of trade at the local stations and along the connecting lines of the Union and Central Pacific Railways. The through trade is small in amount and of little importance compared with the great sum of local traffic. This is especially true with reference to the Union Pacific.

Frequent criticisms, allegations, and complaints have come to this Bureau, been made to the Secretary of the Interior, to the President and Congress, and through the public prints in regard to the policy pursued by the Union Pacific in aiding, by guaranties of their bonds and stocks, other companies whose roads are operated in connection with the Union Pacific system. It has been persistently urged that such guaranties were in violation of law and were made with intent to defraud the Government. These charges, like many others made against the management of the Pacific roads, prove to be altogether groundless and unjust. It would be almost impossible to emphasize too strongly the value to the Union Pacific of its branch lines. It is alone through them that the operations of the main line, on which the Government holds a lien, have been made profitable. Some of the branch lines may not be profitable in themselves, but as feeders to the main line they have a value which does not appear on their own balance sheets. The transcontinental business, which was large and lucrative a few years ago, is now divided among many competitors, and is almost insignificant as to amount and profit. It is the local business alone, most of which is contributed by the branch lines, that brings profit to the main line. Were it not for these "feeders" the Union Pacific would yield no net earnings whatever, and the property would not be worth the amount of its first mortgage bonds.

It seems to be desirable beyond controversy that no conditions of settlement be imposed upon the bonded roads that will prevent their free operations and the making of such improvements on the main lines and extensions of tributary lines as will be necessary to protect their traffic from the continually increasing competition. While it is important that the Government take such action as shall render secure the final payment to it of all moneys due from the subsidized roads, it is of still greater importance that the debtor companies be left free and with the ability to build or acquire such branch lines and secure such valuable connections as will best protect their present business and insure their future prosperity. Otherwise they will be seriously handicapped in the fierce struggle for territory and new traffic, and the country tributary to them will suffer great loss and be retarded in its development through the lack of needed transportation facilities.

If the facts of the situation give warrant to the foregoing suggestions, then the question arises as to what means can best be employed in order to correctly ascertain what terms of settlement should be proposed that will be most likely to secure the debts due the Government and furnish the least embarrassment to the railroad companies. A correct answer can not be given to this question until full information is had as to all the present affairs and future prospects of the railroad companies. Before naming fixed sums to be paid and their dates of payment the ability of the companies to meet the requirements must be ascertained. It is no use to pass a refunding act unless the railroad companies affected agree to it. They can not be legally compelled into acquiescence. The manifest thing to do is to open, through duly authorized agents, negotiations with the railroad companies and see if some just plan of settlement can not be amicably arranged.

Congress is a large, unwieldy, and a busy body. Many important subjects constantly press upon the time and attention of its members. There are at present no means of information available by which members, without the employment of more time than is at their command, can become fully advised upon the relations of the bonded railroads to the Government. No department of the Government, so far as I am advised, is informed as to what the companies desire and what precise terms of settlement they will accede to. It is necessary to know this before any legislation is attempted. It is useless to pass a law that will prove inoperative by reason of the refusal of the railroad companies to accept it.

The Government and the railroad companies should get together. They can no more negotiate advantageously at arms' length than can individuals. If negotiations could be opened, plans suggested, all the facts of the situation fully understood, then it is likely that a satisfactory adjustment might be had. It is quite certain that a settlement can not be effected in any other way. There is not much time to spare. The first series of the subsidy bonds mature in a little over three years. Should a settlement be deferred until the debts fall due there is great danger that such hasty and ill-considered action may then be taken as will work injury to the interests of both the railroad companies and the Government.

It is my opinion, formed after a careful consideration of the whole subject, that the most practical way in which to proceed is for Congress to authorize the Secretary of the Interior or the President to appoint a commission, to consist of not more than three members, all of whom shall be persons in Government employ, to thoroughly investigate the subject, confer with the railroad companies, and make an early report

of their conclusions. It is impossible for individual members of Congress, or even Congressional committees, to find the necessary time to fully investigate the subject so that they may act upon it intelligently. Such a commission as I have suggested would be almost entirely inexpensive. I have no doubt that the railroad companies, although I have no intimations from any of them on the subject, would cheerfully meet all the expense such a commission would incur.

If the commission were unable to agree upon such terms of settlement as would be satisfactory to both the railroad companies and the Government, no expense would have been created and no possible harm done. If, on the contrary, such an adjustment could be agreed upon as would secure to the Government the moneys due to it and not seriously affect the business or credit of the railroads, or burden the traffic and hinder the development of the sections tributary to them, a great public good would be accomplished. Surely the magnitude of the interests involved in this controversy may well command the early attention of Congress.

UNION PACIFIC RAILWAY COMPANY.

This company was formed January 26, 1880, by the consolidation of the Union Pacific Railroad Company, the Denver Pacific Railway and Telegraph Company, and the Kansas Pacific Railway Company. The mileage of the road June 30, 1891, was as follows:

	Miles.
Council Bluffs, Iowa, to Ogden, Utah Ter.....	1, 033. 46
Kansas City, Mo., to Denver, Colo	638. 91
Denver, Colo., to Cheyenne, Wyo.....	104. 06
Leavenworth, Kans., to Lawrence, Kans	31. 93
Council Bluffs, Iowa (Broadway), to junction main line	1. 76
Omaha, Nebr. (Bridge Junction), to old initial point.....	3. 95
Almy Junction, Wyo., to Mine No. 7.....	3. 76
Armstrong to Wyandotte, Kans.....	2. 08
Detroit to Enterprise, Kans.....	1. 95
Total owned.....	1, 821. 86

The company also controls and operates seventeen branch lines, aggregating 5,846.15 miles in length, making a total of 7,668.01 miles in the system. There are also seven other railroad companies whose lines aggregate 674.46 miles in length, in which the Union Pacific Railway Company has a proprietary interest, but the railroads belonging to which are not included in the system.

The portions of the road which were constructed by the aid of a subsidy in bonds and are subject to the requirements of law with respect to the annual payment to the Government of a percentage of earnings are as follows: Bridge Junction, Omaha, Nebr., to Ogden Station, Utah T., 1,029.4810 miles; Ogden Station, Utah Ter., to junction with Central Pacific Railroad (leased and operated by the Central Pacific Railroad Company), 5 miles; Kansas City, Mo., to a point near Boaz, Kans., 393.9425 miles.

The subsidy bonds issued to this company amount to \$33,539,512, the Union division having received \$27,236,512 and the Kansas division \$6,303,000. The United States had paid in interest thereon the sum of \$47,186,149.26, and there had been repaid by the company in transportation services and cash, as shown by the books of the Treasury Department, \$28,844,059.53, which made its liability to the Government June 30, 1891, amount to \$51,881,601.73. The excess of interest paid by the United States over all credits amounted to \$18,342,089.73. The

amount found due from this company under the acts of 1862, 1864, and 1878 for the year ending December 31, 1890, was \$1,169,176.83, whilst the United States paid during the corresponding period the sum of \$2,012,370.72, interest on the bonds issued to this company.

There are 17.25 miles of double track and 542.75 miles of sidings on the main line. Steel rails are laid upon 1,806.53 miles of track and iron rails upon the remainder. The ballast consists of 27.09 miles of stone, 26.81 miles of gravel, 7.03 miles of burnt clay, 34.29 miles of cinders, and the remainder of earth. There are 644 miles of fencing and 1.19 miles of snow sheds.

During the year 17,191.65 tons of steel rails were laid, at a cost of \$604,879.40, and 2,775.45 tons of iron rails at a cost of \$72,391.41, and there were placed in the track 686,152 cross-ties, at a cost of \$365,490.27. The total expenditures for additions and betterments to railway during the year amounted to \$1,516,290.55, and for new equipment to \$980,304.61.

The equipment consists of 534 locomotives, 510 of which are equipped with Westinghouse automatic brakes; 13 dining, 67 sleeping, 31 chair, 132 first class, 8 second class, 68 emigrant, 43 mail and mail combination, 48 baggage, 12 express, 3 combination baggage and express, and 14 officers' cars, making a total of 439 cars in the passenger service, all of which are equipped with Westinghouse brakes and Miller platforms. In the freight service there are 6,103 box, 1,081 stock, 1,803 coal, 471 flat, 124 combination stock and box, 427 refrigerator, 796 fruit, and 228 caboose cars, making a total of 11,033 cars in this service, 6,780 of which are equipped with Westinghouse brakes. There are 50 refrigerator and 182 fruit cars equipped with Miller platforms. In road-repair service there are 13 derrick, 345 dump, gravel, and construction and 27 boarding cars. The foregoing includes the following equipment held in trust by the American Loan and Trust Company of Boston, Mass., as trustee: 159 locomotives, 23 chair, 14 first class, 34 emigrant, 6 mail and mail combination, 15 baggage, 2 combination coach and baggage, 1,009 box, 283 stock, 611 coal, 700 furniture, 350 refrigerator, 500 fruit, 51 caboose, and 101 dump, gravel, and construction cars.

The company reports that to June 30, 1891, there had been patented to it by the United States 7,994,195.19 acres of land and that it had disposed of 13,530,048.20 acres, the total cash receipts from all sources amounting to \$34,340,465.48. There remained outstanding on account of time sales the sum of \$9,256,748.43.

* * * * *

Revenue and expenditures for the year ending June 30, 1891.

REVENUE.

Earnings	\$19,204,825.79
Dividends on stocks of other companies.....	219,826.84
Interest on bonds of this and other companies.....	1,046,851.87
Interest and income from miscellaneous investments..	332,227.95
Receipts of the land department and trust income....	703,311.46
Interest on sinking fund of company.....	418,318.02
Miscellaneous land receipts.....	20,715.63
Interest on Kansas Pacific consolidated bonds repaid by trustees.....	758,400.00
Total.....	\$22,704,477.56

EXPENDITURES.

Operating expenses and taxes.....	12,237,390.85
Interest on funded debt.....	4,424,647.93
Interest on other debt.....	699,512.94

Revenue and expenditures for the year ending June 30, 1891—Continued.

EXPENDITURES—continued.

Sinking fund requirements—company.....	\$472,922.50
New construction.....	1,516,290.55
New equipment.....	980,304.61
Expenses of the land department, taxes, etc.....	257,358.64
United States requirements*.....	1,081,153.43
Premium on sinking fund 8 per cent bonds bought....	215,269.88
Interest paid by trustees of Kansas Pacific consoli- dated bonds.....	758,400.00
Premium on bonds redeemed.....	30,855.29
Profit and loss.....	596,907.39
Total.....	\$23,271,014.01
Deficit.....	566,536.45
* * * * *	

CENTRAL PACIFIC RAILROAD COMPANY.

This road continues to be operated by the Southern Pacific Company under the lease of February 17, 1885, and the modification thereof dated January 1, 1888.

The total length of the road owned and operated June 30, 1891, was 1,360.28 miles, no change having been made in the mileage during the past two years. The main line extends from Oakland Wharf, California, to Ogden, Utah, with branches from Roseville Junction to the Oregon State line, Lathrop to Goshen, and from Niles northward to Oakland and southward to San José, Cal. That portion of the line extending from Ogden, Utah, to Sacramento, thence via Niles to San José, Cal., a distance of 860.66 miles, was aided by the United States with bonds and lands, and is subject to the requirements of law with respect to the payment of a percentage of its net earnings to the Government.

The subsidy bonds issued to aid in its construction amounted to \$27,855,680, and the United States had paid as interest thereon the sum of \$38,491,530.61. There had been repaid by the company, in transportation services and cash, the sum of \$12,028,333.02, making a net liability on June 30, 1891, of \$54,318,877.59. The excess of interest paid by the United States over all credits amounted to \$26,463,197.59. The amount found due under the act of May 7, 1878, for the year ending December 31, 1890, was \$537,520.44, whilst the United States paid during the corresponding period the sum of \$1,671,340.80 interest on the bonds issued to this company.

The roadbed, track, bridges, buildings, shops, and equipment were inspected by the engineer of this Bureau in April last and found to be in fair condition for that season of the year. His report of improvements made during the year will be found in Appendix No. 1.

During the year there were placed in the track 7,143.5 tons of steel rails, at a cost of \$365,600.89, and 429,717 cross-ties, at a cost of \$185,139.94, all of which was charged to income account. The expenditures for new construction amounted to \$141,957.04.

The equipment consists of 241 locomotives, all of which are equipped with Westinghouse brakes; 3 dining, 18 sleeping, 25 baggage, 16 mail, 8 express, 13 baggage, mail, and express, 157 first-class, 33 second-class, 43 emigrant and second-class sleeping, 15 combination passenger and

* The amount found due by this office as the requirement for the year 1890 was \$1,169,176.83.

baggage, and 7 officers' cars, making a total of 338 cars in the passenger service, all of which are equipped with Westinghouse brakes and Miller platforms. In the freight service there are 1,508 box, 35 coal, 1,671 flat, 824 combination, 153 fruit, and 104 caboose cars, making a total of 4,295 cars in this department, 4,193 of which are equipped with Westinghouse brakes, and 88 fruit cars with Miller platforms. There are 180 cars used in road-repair service. During the past year the company has placed dining cars upon its passenger trains between Ogden and Truckee.

The company reports that to June 30, 1891, there had been patented by the Government 2,402,384.34 acres of land, 1,039,710.59 being on account of the Central Pacific and 1,362,673.75 on account of the California and Oregon. There had been sold 2,622,772.40 acres and the total cash receipts from all sources to date amounted to \$9,118,745.79. There remained outstanding on account of time sales the sum of \$1,134,722.34.

The following statements show the financial condition of the company June 30, 1891, the amounts found due under the act of May 7, 1878, from July 1, 1878, to December 31, 1890, under the recent decision of the United States Supreme Court, and other statistics pertaining to the company.

Comparative statement of the funded debt of the Central Pacific Railroad Company, June 30, 1891 and 1890.

Character of bonds.	Term of bonds.		Rate of interest.	Amount of bonds outstanding.		Difference.		Lien.
	Years.	Date of maturity.		June 30, 1891.	June 30, 1890.	Increase.	Decrease.	
Central Pacific Railroad Company.								
First mortgage, series A.	30	1895	Per cent.	\$2,905,000	\$2,995,000			Road and franchise, Sacramento to State Line.
First mortgage, series B.	30	1890	6	1,000,000	1,000,000			Do.
First mortgage, series C.	30	1896	6	1,000,000	1,000,000			Do.
First mortgage, series D.	30	1896	6	1,383,000	1,383,000			Do.
First mortgage, series E.	30	1897	6	3,997,000	3,997,000			Road and franchise, California State Line to 5 miles west of Ogden.
First mortgage, series F.	30	1898	6	3,999,000	3,999,000			Do.
First mortgage, series G.	30	1898	6	3,000,000	3,999,000			Do.
First mortgage, series H.	30	1898	6	3,999,000	3,999,000			Do.
First mortgage, series I.	30	1898	6	3,511,000	3,511,000			Do.
United States subsidy; second mortgage.	30	1895-1898	6	25,885,120	25,885,120			Road and franchise, Sacramento to 5 miles west of Ogden.
First mortgage, series A, extended (Cal- ifornia and Oregon division).	30	1918	5	5,902,000	5,902,000			Road and franchise, Roseville Junction to Oregon State line.
First mortgage, series B (California and Oregon division).	20	1892	6	5,868,000	5,868,000		\$3,000	Do.
Land grant; extended.	10	1900	5	4,258,000	4,261,000			First mortgage, Central Pacific and California lands.
Fifty-year bonds of 1936.	50	1936	6.	56,000	56,000			Lands granted by United States, and all other property except aided line.
Fifty-year bonds of 1939.	50	1939	5	11,000,000	9,872,000	\$1,128,000		Lands granted, and all other property.
Western Pacific Railroad Company.								
Old issue.	30	1895	6	111,000	111,000			Road and franchise, Sacramento to San José.
First mortgage, series A.	30	1899	6	1,850,000	1,850,000			Do.
First mortgage, series B.	30	1899	6	765,000	765,000			Road and franchise, Niles to Oakland.
United States subsidy; second mortgage.	30	1895-1899	6	1,970,500	1,970,500			Road and franchise, Sacramento to San José.
San Francisco, Oakland and Alameda Railroad Company.								
First mortgage.	20	1890	8		133,000		133,000	Road and franchise.
San Joaquin Valley Railroad Company.								
First mortgage.	30	1900	6	6,080,000	6,080,000			Road and franchise, Lathrop to Goshan.
				89,707,050	88,715,080	992,000		

CONCLUSION.

Under the act of June 19, 1878, the jurisdiction of this Bureau extends over forty-nine original companies, which, by consolidation and lease, are now represented and operated by twenty-three companies and have an aggregate of about 47,500 miles of road. I take pleasure in commending the general efficiency of the employes of this Bureau, who have made accurate and comprehensive inspections of the property and accounts of these companies as required by law.

I have deemed it advisable to republish the principal acts of Congress relating to the several bonded and land-grant railways coming under the provisions of the act of June 19, 1878. They will be found in Appendix No. 2.

I have the honor to be, sir, very respectfully, your obedient servant,

H. A. TAYLOR,
Commissioner.

Hon. JOHN W. NOBLE,
Secretary of the Interior.

REPORT OF THE ACTING GOVERNOR OF ARIZONA.

EXECUTIVE DEPARTMENT OF ARIZONA,
Phoenix, September 25, 1891.

SIR: In compliance with your letter of instructions dated July 28, 1891, I have the honor to submit the following report of the affairs, progress, and development of the Territory of Arizona for the year ending June 30, 1891.

POPULATION.

The Eleventh Census, taken last year, placed the population of Arizona at a trifle less than 60,000 souls, exclusive of Indians and others living on reservations. From a careful revision of the work of the enumerators it is evident that 65,000 would have been more nearly correct.

There being no immigration bureau in the Territory nor source of statistical information as to the increase in population since the last report from this office was submitted, the estimate can only be approximated; there is good reason to believe, however, that the increase has been considerable, and that the population of Arizona will number 70,000 people before the close of the current year. There has been quite an influx from Kansas during the past few months, the immigration being attracted by the great agricultural advantages of the southern valleys of the Territory. These people, who have come for the purpose of making permanent homes, will add largely to our prosperity and fixed population:

While mining is still the leading wealth-producing industry of Arizona, agriculture will, no doubt, soon rank first in importance, and the transient prospectors and migrating miners will be largely outnumbered by men of families, making homes and engaging in pastoral pursuits, this without any diminution of mining interests; to the contrary, they are increasing and more prosperous than ever before.

As previously reported in regard to the character and nationality of the population of Arizona, Americans are very largely in the majority, and they have come from every locality and corner of the nation. Our

pioneers were brave men and true, who firmly planted the banner of civilization on a remote and dangerous frontier, and made the rapid growth of this young empire in the western world possible.

Many of the original pioneers of Arizona still survive, having out-lived the hardships of early frontier life and cruel war with treacherous Apaches. They live in comfort and honor, and view with complacent pride the fruition of their labors in the spectacle of a magnificent state forming around them, rich in commerce, natural resources, and social advantages; a sturdy commonwealth, with a population equal in moral worth and mental strength to any in the nation. Bordering on the Republic of Mexico and having been, previous to the "Gadsen purchase," a part of that country, it is not strange that Arizona has quite a number of Mexicans among her people. They are, however, not so numerous as in our sister Territory, New Mexico. They are mostly naturalized citizens, law-abiding, in sympathy with and obedient to American laws and customs, and interested in the education and elevation of their race. There are comparatively few Chinese in the Territory, and although objectionable, they are not sufficiently numerous to disturb the labor question. As the Territory of Utah forms the northern boundary of Arizona, it is natural that we should draw a considerable portion of our population from that source. It is estimated that there are at least 12,000 Mormons in the Territory, engaged principally in agriculture and grazing. The population of Arizona, taken as a whole, will compare favorably with that of any other subdivision of the country.

TAXABLE PROPERTY.

The following tabulated statement shows the kind and quantity of taxable property, and valuation thereof, in the Territory, according to the report of the Territorial Board of Equalization for the current year:

Counties.	Acres.	Value.	Value of improvements.	Value of city and town lots.	Value of improvements.
Apache.....	1,950,076.00	\$461,143.14	\$544,549.20	\$31,837.30	\$101,436.50
Cochise.....	87,887.00	60,753.00	319,930.00	77,575.00	217,508.00
Cocconino.....	462,827.50	229,216.17	14,060.00	68,404.00	75,296.00
Graham.....	52,846.00	349,291.30	335,703.00	33,570.00	72,116.00
Gila.....	9,552.00	328,825.00	112,313.00	26,487.00	79,955.00
Mohave.....	670.00	17,665.00	111,835.00	8,235.00	49,980.00
Maricopa.....	236,927.00	2,072,815.00	251,434.00	1,127,830.00	554,535.00
Pima.....	290,044.00	386,974.00	189,330.00	307,047.00	711,858.00
Pinal.....	46,703.09	308,106.00	272,870.00	58,084.00	146,000.00
Yavapai.....	325,209.97	299,320.89	149,151.00	203,547.70	325,380.00
Yuma.....	11,924.00	58,111.50	1,010.00	29,635.00	13,360.00
Total.....	3,364,668.00+	4,602,121.00	2,302,214.20	1,972,252.00	2,347,424.50

Counties.	Horses.	Value.	Mules.	Value.	Cattle.	Value.	Goats.	Value.	Hogs.	Value.
Apache.....	5,210	\$119,830.00	90	\$2,250	74,132	\$630,122.00	174	\$174.00	414	\$1,212.00
Cochise.....	3,321	68,106.00	232	7,085	95,850	756,992.25	215	215.00	250	762.30
Cocconino.....	5,028	140,844.00	30	1,620	55,062	405,825.00	47	59.00	138	833.00
Graham.....	3,416	82,344.60	167	6,325	66,730	585,718.50	442	464.00	371	1,121.92
Gila.....	3,558	85,083.00	183	5,925	58,645	496,470.45	413	450.00	256	788.75
Mohave.....	1,404	35,671.52	25	700	29,369	252,155.00	1,300	1,300.00	49	166.80
Maricopa.....	5,602	170,501.25	236	10,085	26,509	254,350.95	380	380.00	2,048	6,077.25
Pima.....	5,725	117,532.08	307	8,076	121,377	960,892.12	167	206.00	588	1,737.40
Pinal.....	2,723	63,970.00	251	7,477	48,565	403,551.78	.....	.....	422	1,280.40
Yavapai.....	11,685	298,528.00	146	6,365	142,460	1,205,057.70	300	331.50	830	2,537.50
Yuma.....	240	5,738.00	90	3,065	2,250	19,461.00	.....	.....	94	282.00
Total.....	47,912	1,188,168.45	1,757	58,973	720,940	5,970,597.35	3,468	3,570.50	5,460	16,829.35

Counties.	Sheep.	Value.	Asses.	Value.	Miles of railway.	Value.	All other property.	Total valuation.
Apache.....	165,684	\$21,460.00	92	\$344.00	111.69	\$558,450.00	\$161,450.00	\$2,634,283.14
Cochise.....	3,661	6,600.00	.....	.....	171.00	1,108,625.77	227,588.00	2,081,769.32
Coconino.....	134,899	201,898.00	34	939.00	126.67	578,867.00	258,114.81	1,975,975.98
Graham.....	2,620	5,252.15	219	1,817.10	45.00	161,397.99	52,676.35	1,687,797.94
Gila.....	2,169	8,780.00	397	2,630.00	.....	.....	166,626.00	1,309,223.29
Mohave.....	3,750	8,800.00	136	1,151.73	114.877	574,825.00	87,133.00	1,147,580.67
Maricopa.....	29,118	57,496.50	99	896.00	94.57	596,727.79	606,826.00	5,709,864.74
Pima.....	1,472	2,643.60	87	596.00	125.65	778,781.15	615,580.00	4,081,279.85
Pinal.....	2,215	4,116.00	144	1,171.95	79.79	521,761.41	179,566.00	1,967,974.54
Yavapai.....	5,269	10,551.00	355	2,482.00	153.84	720,620.00	819,265.00	4,034,187.69
Yuma.....	.....	.....	25	187.50	80.00	544,801.91	64,822.00	740,564.51
Total.....	288,727	320,597.28	1,498	12,025.30	1,083.00	6,145,008.02	3,330,676.36	\$28,270,466.28

According to the foregoing tables the Territory has the following assessed taxable property :

3,364,668 acres of taxable land.....	\$4,602,121.00
Improvements thereon.....	2,302,214.20
City and town lots.....	1,972,252.00
Improvements thereon.....	2,347,424.50
720,940 cattle.....	5,970,597.35
288,727 sheep.....	320,597.28
47,912 horses.....	1,188,168.45
1,757 mules.....	58,973.00
1,498 asses.....	12,025.30
3,460 goats.....	3,579.50
5,460 hogs.....	16,829.32
1,083 miles of railroad.....	6,145,008.02
All other property.....	3,330,676.36
	\$28,270,466.28

The average valuation is :

Land per acre.....	\$1.37
Cattle per head.....	8.28
Horses per head.....	24.79
Sheep per head.....	1.11
Mules per head.....	33.36
Asses per head.....	8.03
Goats per head.....	1.03
Hogs per head.....	3.82
Railroads per mile.....	5,674.06

The valuation of improvements and other property is correspondingly low. The rate of taxation varies in the different counties, but the average rate in the Territory for all purposes is \$3.28 + on \$100. The total assessed valuation of the taxable property in the Territory as given above is \$28,270,466.28. There is unquestionably \$70,000,000 of taxable property in Arizona, and fully that amount would be stated if proper assessments and valuations were had. The present system of low valuations and high rates is injurious and misleading and calculated to create false impressions with intending immigrants and investors. Notwithstanding the heavy debt of the Territory, our financial condition would be good if our property were properly assessed and valued, and we would not be continually required to explain why the rate of taxation in Arizona is higher than the rate of interest required for money on call loans in some parts of the East. The truth is, not over one-third of our property is assessed, and very little property except real estate is rated at over one-half its actual value.

It is conceded by all who are acquainted with the facts that if all the property of Arizona were assessed, and at its full value, the rate of taxation would be as low here as in many of the most prosperous States.

It is very necessary for the Territorial welfare that these facts be understood and appreciated throughout the country.

The total assessed valuation of the Territory has increased nearly a quarter of a million of dollars since last year, notwithstanding a reduction of over \$470,000 in railroad valuations.

FINANCIAL CONDITION OF THE TERRITORY.

The following official statements show the bonded and floating indebtedness of the Territory, life of the bonds, amount of annual interest, and rate of interest on bonds and warrants; also the county and municipal indebtedness, valuation of property, rate of taxation, etc.:

Territorial bonds and floating indebtedness.

Names of the bonds.	Date issued.	Amount.	Rate of interest.	Annual interest.	When mature.
			<i>Per cent.</i>		
Territorial prison bonds.....	Mar. 1, 1879	\$15,000	10	\$1,500	15 years; first issue.
Do	Mar. 1, 1880	15,000	10	1,500	15 years; second issue.
Gillette-Tiger Mine wagon road	Apr. 1, 1879	20,000	10	2,000	15 years.
Florence-Globe City wagon road	.....do	10,000	10	1,000	Do.
Tucson-Globe City wagon road	.....do	10,000	10	1,000	Do.
Agua Fria-Camp Verde wagon road.	Aug. 1, 1879	10,000	10	1,000	Do.
Yuma-Ehrenberg wagon road...	May 1, 1881	10,000	10	1,000	Do.
Territorial redemption.....	June 1, 1883	214,000	7	14,980	*\$260,000, issued 20 years; \$46,000 redeemed to date.
Insane asylum	Mar. 9, 1885	100,000	7	7,000	20 years; part in 10 years if surplus in fund.
Wagon road bridge.....	Nov. 1, 1885	12,000	8	960	15 years.
Gila bridge.....	May 15, 1885	15,000	8	1,200	Do.
Arizona University	Jan. 1, 1887	25,000	7	1,750	20 years; part in 10 years, if surplus in fund.
Territorial funding.....	Jan. 15, 1888	150,000	6	9,000	25 years.
Total.....		604,000		43,890	

* Provisions for proportionate redemption after 5 years.

General fund warrants outstanding September 12, 1891.....	\$190,030.53
Interest on general fund warrants at 10 per cent. accumulated so far this year.....	15,360.80
Territorial indebtedness, bonded	604,000.00
Interest thereon	43,890.00
Floating	190,030.53
Interest	15,360.80
Total	853,281.33

*County indebtedness.**

Counties.	Debt, floating and bonded.	Rate of taxation for all property.	Counties.	Debt, floating and bonded.	Rate of taxation for all property.
Apache	\$140,000.00	3.00	Pima	\$334,485.57	2.89
Cochise	155,000.00	3.50	Pinal	175,723.27	3.21
Coconino	153,000.00	2.85	Yavapai.....	381,500.00	3.00
Gila	38,561.55	3.50	Yuma.....	112,000.00	4.85
Graham	200,315.05	3.25	Total	2,175,605.44	
Mohave	120,000.00	3.30			
Maricopa.....	317,000.00	2.75			

* Total valuation of each county is given in table of taxable property.

Indebtedness and valuation of incorporated cities.

Cities.	Indebtedness.	Valuation.
Phoenix.....	\$22,000.00	\$1,320,000.00
Tucson.....	32,000.00	1,920,000.00
Prescott.....	*50,000.00	*1,500,000.00
Tombstone.....	14,000.00	870,000.00
Total.....	128,000.00	4,790,000.00

* Approximated.

The average rate of interest throughout the Territory for all purposes is \$3.28; 71 cents of this tax is applied for Territorial purposes, and is insufficient to defray the expenses of government, pay interest, and provide for proper redemptions. It is also believed that a sufficient tax levy is not made in the different counties. The reason for this, however, as stated by responsible parties, is, that the increase of property and values in the Territory will soon provide for payment of the indebtedness and maintenance of the government without increase of taxation.

The total indebtedness of the Territory, counties and municipalities, is reliably stated as follows:

Territory (bonded and floating)	\$355,281.33
Counties (bonded and floating)	2,175,605.44
Cities (bonded and floating).....	188,989.00
Interest on county and city debt (approximated after allowing for periodical redemptions).....	180,127.00
Total.....	3,400,002.77

The Territorial indebtedness, as above, amounts to about 12 per cent. of the property valuation, or a trifle over \$56 per capita of our people according to the census. This would not be the fact if the property were properly assessed; to the contrary, with a property valuation of \$70,000,000, to which we are entitled, our debt would be inconsiderable.

SETTLEMENT OF LANDS.

In reference to this subject full information is contained in the following reports by United States land offices of the Territory:

Hon. N. O. MURPHY,
Acting Governor, Phoenix, Ariz.: UNITED STATES LAND OFFICE,
Prescott, Ariz., September 12, 1891.

DEAR SIR: Complying with your request of the 7th instant, we make the following statement of the business done in this office during the fiscal year ending June 30, 1891:

The preëmption and timber-culture acts, as you are aware, were repealed in March last, consequently there was but little done under either of these laws. There were, however, a few sundries or filings under each, leaving the record about as follows:

	Acres.
27 coal-land filings, about.....	4,090.00
97 preëmption filings, embracing about	15,000.00
4 original timber-culture entries	480.00
80 homestead entries.....	12,261.97
35 final homestead entries.....	5,479.99
21 cash entries	2,120.01
2 original desert-land entries.....	120.00
1 final desert-land entry	420.00
1,650 quarter sections, railroad selections.....	263,923.46
16 final mineral-land entries	306.00
Total.....	303,931.43

Respectfully submitted.

T. J. BUTLER,
Receiver.

Hon. N. O. MURPHY,
Acting Governor, Phoenix, Ariz.:

UNITED STATES LAND OFFICE,
Tucson, Ariz., September 18, 1891.

DEAR SIR: I have the honor to transmit herewith, as per your request, 7th instant, a full and complete record of the agricultural and mineral entries made in this office, for the year ending June 30, 1891.

Original entries.	No.	Acres.	Final entries.	No.	Acres.
Homestead	162	22,619.03	Homestead	96	14,106.54
Desert land	139	36,734.93	Desert land	80	28,880.88
Preemptions	93	12,224.50	Cash	103	12,651.39
Timber culture	51	7,224.50	Timber culture	2	240.57
Mining applications	21	342.35	Mineral	16	267.67
Total	466	79,120.81	Total	259	56,146.93

RECAPITULATION.

	No.	Acres.
Original entries	466	79,120.81
Final entries	279	56,146.93
Total	745	135,267.74

The foregoing does not include some 10,000 acres of land passed under special letter of the Department, because of ex-Receiver Smith's defalcations.

Very respectfully,

HERBERT BROWN,
Register.

In addition to the foregoing, the following information furnished by the United States officers of the Gila land district is instructive and interesting:

The Gila land district, of which the United States land office is situated in Tucson, is comprised of the counties of Cochise, Pima, Pinal, and Gila, and portions of Maricopa, Graham, Apache, and Yuma. The line of demarkation between the Gila and Prescott land districts is the first correction line north, or the first standard parallel north of the base line of Arizona which passes through the confluence of the Gila and Salt rivers, easterly and westerly, commencing on the Colorado, 72 miles in an air line north of Yuma, and runs directly east, passing north of Phoenix, 12 miles south of Wickenburg and 20 miles north of Globe, and strikes the New Mexican line 42 miles north of Clifton, Ariz. The area of this district comprises 45,318 square miles, or nearly 30,000,000 of acres, exceeding in size the great State of Pennsylvania 318 square miles, or 203,520 acres; but notwithstanding the enormous size of the Gila district; it is less than the Prescott district by 23,000 square miles, or 14,720,000 acres.

A casual glance at the foregoing shows Arizona to be not an estate, but an empire, capable of great and unlimited possibilities when its vast resources, now practically untouched, shall have been developed. Inclusive of the lands contained in the Indian and military reservations the approximate amount of land entered at the office in this district amounts to but one-thirtieth of the whole area. The room for profitable investment in Arizona is equalled by no other State or Territory in the Union. The little that has been done is indicative of what can be done, and sooner or later will be done. The deserts of Arizona will disappear under the rose bush and the dread of the Apache under the

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will yet marvel at the greatness of Arizona. Let the
be carefully considered:

quantity of public land unsurveyed, exclusive of mili-
reservations, *subject to settlement* under existing laws,
each county in the Gila land district, Arizona:

County.	Acres.	County.	Acres.
.....	27,760	Gila	410,020
.....	2,230,440	Maricopa	3,600,000
.....	2,561,280	Yuma	4,165,790
.....	5,065,119	Total	20,221,775
.....	2,220,466		

ximate quantity of public lands subject to entry or filing July
exclusive of military or Indian reservations in each county in
land district, Arizona, is as follows:

County.	Acres.	County.	Acres.
.....	13,440	Gila	40,780
.....	620,630	Maricopa	377,680
.....	1,327,416	Yuma	526,810
.....	1,204,000	Total	4,873,290
.....	762,494		

The following is the approximate quantity of public lands entered
under the several land laws of the United States in Gila land district:

County.	Acres.	County.	Acres.
Apache	138,240	Maricopa	414,720
Cochise	60,864	Yuma	115,260
Pima	184,320	Total	1,082,344
Pinal	100,000		
Gila	10,000		

RAILROADS—COMMERCE AND PROGRESS.

The following railroads are now being operated in the Territory:

	Miles.
Southern Pacific of Arizona	383
Atlantic and Pacific	393
New Mexico and Arizona	87
Prescott and Arizona Central	73
Arizona and New Mexico	41
Arizona and Southeastern	36
Central Arizona	35
Maricopa and Phoenix	34
Total	1,082

STOCK RAISING.

The assessment rolls as reported by the Territorial board of equali-
zation states the number of stock in the Territory as follows:

Cattle	720,940	Goats	3,468
Sheep	288,727	Mules	1,757
Horses	47,912	Asses	1,498
Hogs	5,460		

The total valuation being placed at \$7,570,768.90, or an average valuation per head as follows:

Cattle	\$8.28	Goats	\$1.03
Sheep	1.11	Mules	33.56
Horses	24.79	Asses	8.03
Hogs	3.82		

* * * * *

Mineral production of Arizona.

Counties.	Copper in pounds.	Gold.	Silver.	Total in gold and silver.
Mohave		\$200,000	\$300,000	\$500,000
Yavapai	3,000,000	500,000	175,000	675,000
Yuma		200,000	30,000	230,000
Maricopa		40,000	585	40,585
Pima		100,000	750,000	850,000
Pinal		200,000	205,000	405,000
Cochise	9,500,000	57,955	200,000	257,955
Graham	10,000,000	10,000	3,000	13,000
Gila	7,000,000	5,000	20,000	25,000
Other mines	500,000			
Total	30,000,000	1,212,955	1,683,585	2,996,540
Returns from smelting and express companies not included above.		300,265	325,467	625,732
Copper				4,200,000
				7,791,272

* * * * *

School libraries are gradually growing, and at the present time twenty-four districts have secured a start. In volumes they number 2,261. The total value of school property in the Territory, including buildings and grounds, amounted in 1890 to \$268,435, having increased since 1887 from \$176,238. Before that time complete records are not available. The cost per child per month has ranged in the past 8 years from \$5.01, the lowest in 1888, to \$7.03, the highest in 1884. This is estimated upon the average attendance, and not the whole number of children. As the attendance increases this amount will be reduced.

Educational progress in the Territory for the past 8 years.

Year.	Total receipts.	Total expenditures.	No. of schools.	Average school month.	Census children.
1883	*\$101,390.02	\$77,997.85	104	6	19,360
1884	205,901.28	161,861.57	121	7	9,360
1885	186,668.12	138,164.83	137	7.3	10,219
1886	159,956.14	133,030.39	150	0.1	10,219
1887	129,044.88	117,004.74	169	6.3	10,303
1888	157,707.03	130,212.14	184	6.1	10,303
1889	179,782.35	150,543.41	197	0.1	12,588
1890	201,288.70	177,483.83	219	6.1	12,882

Year.	Average daily attendance.	Daily attendance percent. on census.	Teachers employed.	Average salary per month.	Cost per child per month.	Value of school property.
1883	2,554	24½	98	\$75	\$5.09	.....
1884	3,287	35	143	85	7.03	.....
1885	3,226	31½	131	86	5.98	.....
1886	3,507	34½	150	78	6.21	.....
1887	3,002	35	175	81	5.28	\$176,238
1888	3,849	37½	191	80	5.01	222,219
1889	4,203	34½	199	79	5.48	222,058
1890	4,702	36½	240	77	5.97	268,435

* Includes balance from previous year.

† Census taken biennially: 1883 includes children 6 to 21; 1885 to 1889 includes children 6 to 18.

‡ Includes \$18,000, cost of building new school houses in Phoenix, Maricopa County. Correct cost per child, \$5.42.

As shown by the table, the increase in efficiency of the school system has been uniform and rapid, and while the increase in population has been in the last decade 47.43 per cent., the increase in enrollment of school children has been 85.85 (United States census).

* * * * *

UNDEVELOPED RESOURCES.

The undeveloped resources of Arizona consist of mountains of valuable minerals, and thousands of square miles of agricultural, grazing, and timber lands, the extent and value of which can scarcely be measured.

Respectfully submitted.

N. O. MURPHY,
Acting Governor.

HON. JOHN W. NOBLE,
Secretary of the Interior.

REPORT OF THE GOVERNOR OF NEW MEXICO.

TERRITORY OF NEW MEXICO,
EXECUTIVE OFFICE,
Santa Fe, N. Mex., October 12, 1891.

SIR: In response to the request contained in your letter of July 28, I have the honor to transmit the following report on the condition, the progress, and the development of this Territory during the last year.

Very respectfully,

L. BRADFORD PRINCE,
Governor of New Mexico.

HON. JOHN W. NOBLE,
Secretary of the Interior.

* * * * *

POPULATION.

Nothing official can be added to the full tables of population inserted in my last report. There is a gradual and healthy growth all over the Territory. The number of votes cast at the election in November, 1890, corroborated the estimate which I made of the population last year, viz, that it was between 180,000 and 185,000. The vote at successive Congressional elections shows an extraordinarily regular increase in population, the vote increasing almost exactly 1,000 each year. The following is the table:

1874.....	15,781	1884.....	27,086
1876.....	17,009	1886.....	28,589
1878.....	18,797	1888.....	30,510
1880.....	20,397	1890.....	32,355
1882.....	24,728		

ELECTION.

An election was held in November, 1890, for Delegate in Congress and county officers. The result, so far as Delegate is concerned, was as follows:

Counties.	For Antonio Joseph.	For Mariano S. Otero.	Majority for Joseph.	Majority for Otero.	Scattering.
Bernalillo	1,390	2,042	.....	652	2
Chaves	361	39	352	.....	.....
Colfax	906	730	176	.....	.....
Doña Ana	1,031	1,020	11	.....	.....
Eddy	273	162	111	.....	.....
Grant	1,035	987	48	.....	3
Lincoln	601	361	240	.....	1
Mora	1,525	897	718	.....	.....
Rio Arriba	1,155	1,428	.....	273	.....
San Juan	210	195	115	.....	.....
San Miguel	3,386	1,908	1,478	.....	1
Santa Fe	1,571	1,504	67	.....	1
Sierra	1,647	530	117	.....	.....
Socorro	1,427	885	542	.....	.....
Taos	994	1,034	.....	40	.....
Valencia	564	1,510	.....	946	.....
Totals	17,206	15,142	3,975	1,911	7
Majority	15,142	.....	1,911	.....	.....
Majority	2,064	.....	2,064	.....	.....

Total vote, 32,355.

FINANCES.

The total assessed valuation of the property in the Territory in 1887 was \$45,462,459; in 1888 it was \$45,690,723; and in 1889, \$46,041,010. In 1890 the total was \$45,199,847.91; of this, \$1,972,162.25 was exempt from taxation under various Territorial laws. The valuation by counties was as follows:

Counties.	Total.	Exempt from taxation.	Subject to tax.
Bernalillo	\$5,826,872.72	\$261,600.00	\$5,565,272.00
Colfax	4,124,900.42	155,500.00	3,969,400.42
Doña Ana	3,554,951.52	139,200.00	3,415,751.52
Grant	4,902,066.50	125,100.00	4,777,506.50
Lincoln	4,366,474.00	176,400.00	4,190,074.00
Mora	1,915,311.65	123,850.00	1,791,461.65
Rio Arriba	965,328.53	65,400.00	899,928.53
San Juan	630,604.91	119,389.75	511,215.16
San Miguel	7,680,232.75	223,200.00	7,457,032.75
Santa Fe	3,149,871.60	162,900.00	2,986,971.60
Sierra	1,967,749.78	70,147.50	1,897,602.28
Socorro	4,062,322.48	148,075.00	3,914,247.48
Taos	826,519.00	87,300.00	739,219.00
Valencia	1,226,042.00	114,100.00	1,111,942.00
Total	45,199,847.91	1,972,162.25	43,227,685.66

The cause of the slight decrease in valuation was the reduction that was made generally throughout the Territory in the value of cattle. In other respects the returns show a healthy increase.

The Territorial indebtedness at the close of the forty-first fiscal year (March 3, 1891) was as follows:

Capitol building bonds, 7 per cent, due in 1904	\$100,000.00
Capitol building bonds, 7 per cent, due in 1905	100,000.00
Penitentiary building bonds, 7 per cent, due in 1894	120,000.00

Current expense bonds, 6 per cent, 5-20.....	\$150,000.00
Capital contingent bonds, 6 per cent, due in 1903.....	50,000.00
Provisional indebtedness bonds, 6 per cent, 20-30.....	200,000.00
Amount of outstanding warrants.....	146,433.03
Total.....	866,433.03

The expenses during the forty-first fiscal year were as follows:

Penitentiary expenses and salaries.....	\$29,663.31
Capitol current expenses.....	6,760.44
Salaries of officers.....	19,685.00
Compensation of assessors.....	13,782.43
Transportation of convicts.....	3,571.10
Territorial institutions.....	23,100.00
Court expenses.....	49,940.60
Interest on outstanding warrants.....	9,948.44
Miscellaneous, as per auditor's report.....	19,050.21
Treasurer's incidental expenses.....	174.30
Librarian's incidental expenses.....	26.85
Bureau of immigration.....	500.00
Rewards by governor.....	100.00
Printing, twenty-ninth legislative assembly.....	1,312.00
Bringing registration books.....	181.60
Printing dockets for supreme court.....	41.00
Militia.....	342.06
Hospital of Las Vegas.....	499.80
Total.....	178,679.29

The financial condition of New Mexico is remarkably good. The bonded debt will be reduced very soon by the purchase of about \$7,000 of penitentiary bonds, the money for which is in the treasury.

The good effects of the finance act passed in 1889 are very manifest. Some temporary inconvenience will be occasioned by the action of the late legislature in making appropriations for the present year considerably in excess of the amount of tax levied. This, however, will not affect the succeeding year, when the estimated receipts will fully equal the expense.

The assessed valuation of 1891 will considerably exceed that of 1890.

The following table, showing the value of lands and houses and of certain kinds of personal property in the different counties according to the assessment returns for 1890, is both interesting and valuable. No figures could be obtained respecting Bernalillo County at the auditor's office, but all the other counties are included in the table.

Counties.	Lands.	Houses and improvements.	Horses.		Mules.	
			No.	Value.	No.	Value.
Bernalillo.....						
Colfax.....	\$1,356,450.00	\$352,523.00	4,576	\$97,376	191	\$10,019
Doña Ana.....	880,414.00	564,440.00	3,630	81,686	118	5,089
Grant.....	219,884.00	1,147,952.00	5,458	127,652	257	11,067
Lincoln.....	742,441.00	309,214.00	13,810	269,956	564	22,622
Mora.....	709,098.13	73,019.50	2,270	51,190	142	4,348
Rio Arriba.....	114,858.00		1,202	40,249	114	4,199
San Juan.....	104,504.22	96,164.97	2,892	95,758	93	3,650
San Miguel.....	2,056,781.00	785,923.00	5,827	135,674	494	16,327
Santa Fe.....	793,741.00	803,222.00	723	26,783	158	7,245
Sierra.....	222,945.00	241,631.00	3,680	78,182	187	7,412
Socorro.....	613,881.00	450,074.00	5,035	128,425		6,632
Taos.....	211,295.00	52,309.00	1,061	21,565	144	5,474
Valencia.....	161,103.05	85,963.00	2,301	46,600	261	6,647
Total.....	7,179,398.90	4,962,405.47	52,465	1,201,105	2,713	112,734

Counties.	Cattle.		Sheep.		Goats.		Swine.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Bernalillo.....	138,202	\$1,140,994.00	95,865	\$112,458	824	\$877	474	\$1,578
Colfax.....	52,458	374,768.00	27,228	31,400	2,244	2,550	289	867
Dona Ana.....	147,480	1,202,827.00	13,327	15,947	10,573	11,578	374	1,045
Grant.....	299,499	2,207,600.00	108,188	150,766	13,264	14,918	1,161	2,659
Lincoln.....	29,270	251,189.50	115,151	119,274	4,037	4,048	447	1,136
Mora.....	6,678	100,470.00	59,000	59,000	1,126	1,126	150	470
Rio Arriba.....	17,769	231,077.00	25,633	25,841	87	107	426	1,694
San Juan.....	149,655	1,257,761.00	263,314	280,423	6,843	7,467	482	1,471
San Miguel.....	5,262	63,000.00	82,240	83,000	1,120	1,120	120	600
Santa Fe.....	77,120	579,395.00	6,637	7,225	4,177	5,298	290	1,058
Sierra.....	130,806	1,365,020.00	65,247	65,970	5,008	5,646	231	583
Socorro.....	2,252	24,619.00	96,965	96,985	4,560	4,560	499	1,189
Taos.....	72,637	447,318.00	219,454	214,254	1,912	1,916	376	1,049
Valencia.....								
Total.....	1,129,088	9,336,038.50	1,172,249	1,262,603	55,775	61,127	5,319	15,399

Counties.	Burros.		Carriages.		Wagons.		Railroads.
	No.	Value.	No.	Value.	No.	Value.	
Bernalillo.....							
Colfax.....	125	\$520.00	153	\$4,795	366	\$9,642	\$694,543.42
Dona Ana.....	94	564.00	146	7,850	274	6,977	1,250,449.52
Grant.....	52	499.00	173	11,715	482	16,540	1,179,625.51
Lincoln.....	206	1,814.00	881	30,914			
Mora.....	289	998.00	101	3,188	407	9,821	241,721.87
Rio Arriba.....	162	787.00			250	11,429	441,335.00
San Juan.....	80	841.00	28	990	267	8,344	
San Miguel.....	965	4,150.00	233	11,676	821	21,609	697,553.00
Santa Fe.....	226	1,300.00	230	6,880	240	8,400	378,590.00
Sierra.....	130	993.00	68	3,920	315	10,846	327,140.00
Socorro.....	184	947.00	173	7,382	458	12,696	903,438.28
Taos.....	220	1,025.00	60	2,000	253	6,333	200,930.00
Valencia.....	358	1,759.50	141	4,940	376	10,103	
Total.....	3,691	16,197.50	2,387	96,250	4,509	132,740	6,315,236.60

EDUCATION.

PUBLIC SCHOOLS.

In no respect is New Mexico making such progress as in public education. Even under the crude system which has existed heretofore the number of children under instruction had increased in a ratio far in advance of the population. The late census developed the fact that while the population of the Territory increased 28 per cent during the decade from 1880 to 1890, the number of children enrolled in the schools increased 283 per cent, or ten times as rapidly.

As mentioned under the head of "Legislation," the crowning work of the late legislature was that relative to public education. For the first time a regular system has been instituted, with an official head. While the laws are not yet perfect, yet they are far in advance of those which they superseded in every respect. Teachers' examinations are required and a careful supervision provided for. Districts are authorized to levy special taxes and to bond for school buildings. The money derived from licenses is devoted to education. Uniformity of school books is required, the selection being made by the Territorial board. This board consists of the governor, superintendent of public instruction, and the presidents of the University, the Agricultural College, and St. Michael's College.

The law has gone into operation so recently that its effects can not be seen in statistics. But they are already very apparent in the general character of our educational work.

Immediately after the passage of the new law, in February last, Hon. Amado Chavez was appointed Territorial superintendent, and has entered upon the work with great zeal and enthusiasm.

Many school-houses are being erected. The grade and character of teachers are greatly improved. The adoption of uniform books has not only insured a better class of works, but has greatly reduced the price.

The new act requires regular reports to be made by the county superintendents to the Territorial superintendent, so that hereafter accurate statistics can be furnished. At present, however, they are far from perfect or satisfactory. The following table is the best that can be prepared from data received from the various counties, but in several cases the figures of last year have had to be used, and such are designated by an asterisk (*); others that are estimated are marked by a dagger (†). It is far from accurate, and the column of "pupils enrolled" and of "tax" are specially unsatisfactory. In the latter some of the counties have included license fees and some have not, so that it is not a correct guide; and in the former it is evident that in some counties the total number of children of school age has been returned as the number enrolled.

Public schools.

Counties.	Schools.	Taught in Eng- lish.	Taught in Span- ish.	Taught in both languages.	Public school- houses.	Male teachers.	Female teachers.	Pupils enrolled.	Average daily attendance.	Amount regu- lar taxation.	Amount raised by poll tax.
Bernalillo	47	*4	*28	*14	.....	32	15	12,400	1,020	\$16,000	\$2,000
Chaves	2	1	.....	1	2	2	2	245	153	3,442	73
Colfax	34	15	.....	19	.....	17	17	2,739	1,800	10,000	500
Doña Ana	24	18	5	1	1	12	15	818	585	8,000	*350
Eddy	9	17	(†)	12	14	14	14	457	1300	2,915	1150
Grant	27	22	1	4	19	14	25	11,000	1600	13,000	12,000
Lincoln	37	31	6	.....	23	16	18	790	660	5,400	700
Mora	51	3	1	47	8	40	11	12,000	*1,500	14,700	*191
Rio Arriba	25	.....	25	10	.....	35	.....	*1,000	*650	*2,940	1400
San Juan	17	14	.....	3	6	8	9	430	302	1,075	261
San Miguel	90	18	18	54	28	70	20	4,600	3,900	14,245	1,943
Santa Fé	26	7	4	15	5	20	9	1,071	794	7,682	733
Sierra	10	6	.....	4	6	7	5	584	261	7,231	412
Socorro	48	15	17	16	16	32	18	1,835	1,143	10,654	2,400
Taos	36	4	.....	32	3	31	5	1,764	*1,125	1,531	2,310
Valencia	40	4	30	6	12	34	6	3,034	1,825	*6,500	825
Total	533	109	135	228	132	373	179	24,767	17,218	115,315	15,248

The total railroad mileage in New Mexico at present is as follows:

Atchison, Topeka, and Santa Fé:	
Main line, north and south (1879-'81)	503.1
Lamy to Santa Fé (1880)	18.
Rincon to Deming (1881)	53.
Dillon to Blossburg (1881)	5.9
Nutt to Lake Valley (1884)	13.3
Socorro to Magdalena (1884)	27.1
Magdalena to Kelley (1885)	3.9
San Antonio to Carthage (1882)	9.6
Las Vegas to Hot Springs (1882)	6.4
Hot Springs westward (1887)	1.9
Silver City Branch	48.
	<hr/> 690.20
Atlantic and Pacific:	
Main line (1881)	166.60
Sidings (188-)	22.25
San José Quarry spur (1888)	3.41
	<hr/> 192.26

Southern Pacific:		
Rio Grande to Deming (1881).....	73.46	
Deming to Arizona line (1880).....	93.76	
		167.22
Denver and Rio Grande:		
Colorado line to Española (1880).....	85.86	
Between Antonito and Durango (1880).....	69.03	
Tres Piedras lumber branch (1888).....	2.15	
Chama lumber branch (1888).....	3.16	
		160.47
Denver, Texas and Fort Worth, in New Mexico.....		83.30
Santa Fé Southern, Española to Santa Fé.....		39.00
Arizona and New Mexico, Lordsburg to Arizona line, about.....		32.00
Pecos Valley Railroad, in New Mexico.....		35.00
Trinidad to Catskill, in New Mexico.....		27.00
Silver City and Northern, in New Mexico.....		19.00
Total.....		1,445.45

FUTURE DEVELOPMENT.

In my report of 1889, under the head of "Undeveloped resources," I made the assertion that, "New Mexico is endowed with a greater variety and extent of natural resources and advantages than any State in the Union." As this seemed such strong language as to savor of exaggeration, I proceeded somewhat in detail to make a comparison in order to show that the picture was not overdrawn. With the increased knowledge that we now have, few will dispute the proposition. God has endowed us with natural resources in the most generous manner. But resources of themselves are of no value; so long as they lie dormant they are useless. It is necessary that they should be developed by human enterprise. In last year's report, under the same head, I pointed out that with all these natural advantages, we were importing from other States nearly all of the staple articles which we should produce ourselves, and presented statistics which were quite startling on this subject. They were intended to startle our own people into greater activity, and to show to others the vast "home market" which existed here for the ordinary products of the farm and the orchard.

Another year has passed, and I am able to report that in every branch of production we are having a wonderful increase and development. It is evident that the situation is being understood and acted upon. Not only are those from abroad coming to aid in this work, but our own citizens seem to be thoroughly aroused and filled with a determination to supply this home market demand by their own exertions. There is no point of view from which we can regard New Mexican affairs without seeing a marked advance.

To begin with agriculture, the acreage in crops has been largely increased all over the Territory. If we turn to horticulture, the advance is still more marked. In every section orchards are being commenced or enlarged.

Improved systems of irrigation are advancing rapidly.

The animal industries are in a more satisfactory condition than for some years.

The lumber product is increasing rapidly in all sections. In mining, unprecedented activity prevails.

In short, in all branches of practical industry New Mexico is making rapid and substantial progress. In every way her resources are being developed, and general prosperity prevails.

Nor is this all. The most important factors in our future greatness

are yet to be stated. It seems as if all at once the barriers which have existed to our advancement have been broken down.

For years we have suffered under the incubus of unsettled land titles. The uncertainty which prevailed prevented sales and paralyzed enterprise. Throughout almost a generation our people had endeavored to obtain Congressional action to remedy this evil, but without effect. But at length it is accomplished. The long-hoped for relief has come. The land court is already established, and a brief time will see every element of uncertainty removed. It is impossible to realize the wonderful effect which this will have. It will give stability to titles and confidence to investors. It will bring both the men and the money which we need for our development. To supplement this, the late legislature passed an act for the incorporation of community grants, which will settle vexed questions with regard to them. The action of the legislature generally was progressive and salutary. It provided for the improvement of roads, for the incorporation of villages, for the protection of the cattle interest, for the suppression of trusts, for the impartial selection of juries, for the reduction of liquor selling, and, most important of all, for the establishment of an efficient system of public schools. The new school laws will soon cause New Mexico to be covered with public schools, and the coming generation to be the equal of that in the most favored States.

Thus in every way the tendency is upward and onward. The future is not only assured, but the full fruition of its prosperity is near at hand. Already we are enjoying the first fruits of the new era of progress. We are producing far more and buying much less this year than last. With a little increase we will soon bring the balance of trade to our own side. No more propitious time for new citizens to take part in our manifest destiny can be imagined. The night of waiting is far spent, the day is at hand. And New Mexico welcomes all worthy men and women to join us in the pleasures and prosperity of that day.

Very respectfully,

L. BRADFORD PRINCE,
Governor of New Mexico.

REPORT OF THE GOVERNOR OF UTAH.

TERRITORY OF UTAH,
Salt Lake City, October 1, 1891.

SIR: In compliance with your request of July 28, 1891, I respectfully submit the following report of the affairs, and of the progress and development of the Territory of Utah, since the date of my last report, September 9, 1890.

POPULATION.

Comparative statement of the population of Utah Territory, by counties, for the years 1890 and 1891.

County.	Census report, 1890.	Assessors' returns, 1891.	County.	Census report, 1890.	Assessors' returns, 1891.
Beaver	3,340	3,147	Garfield	2,457	2,214
Box Elder	7,642	6,695	Grand	541	521
Cache	15,509	16,438	Iron	2,683	2,850
Davis	6,469	5,406	Junab	5,582	5,786
Emery	4,866	5,766	Kane	1,685	*1,110

* Several precincts missing.

Comparative statement of the population of Utah Territory, etc.—Continued.

County.	Census report, 1890.	Assessors' returns, 1891.	County.	Census report, 1890.	Assessors' returns, 1891.
Millard	4,033	4,500	Taoele	3,700	13,301
Morgan	1,780	1,600	Uintah	2,292	3,000
Piute	2,842	2,593	Utah	23,416	27,368
Rich	1,527	1,489	Wasatch	4,627	3,222
Salt Lake	58,457	59,201	Washington	4,009	4,351
San Juan	365	382	Weber	23,005	23,179
San Pete	13,146	*11,350	Total	207,905	210,762
Sevier	6,199	7,101			
Summit	7,733	8,252			

* Several precincts missing.

† Estimated.

The above statement is based upon the returns made by the county assessors under the law of the last legislative assembly, which made it their duty to collect such statistics. It will be noticed that in twelve of the counties there is an apparent decrease of 7,109 in the population, and in the other thirteen an increase of 9,965. I do not think the returns made are reliable as a whole, as some of the counties in which a decrease is shown are in a prosperous condition. On the face of the returns the population is given at 210,762, an increase of 2,857 over the year 1890. If it be assumed the increase for the year 1891 is at least equal to the average annual increase from the year 1880 to the year 1890, the total population would now be very nearly 215,000.

IMMIGRATION.

The foreign immigration to the Territory during the past year will not exceed 2,000 and has come mainly from English and Scandinavian countries. These immigrants have located principally in Salt Lake and Ogden, and in the more thickly settled counties. The domestic immigration has been confined largely to the counties of Salt Lake, Weber, Utah, Summit, Juab, Emery, and two or three others. Within these counties are the great commercial and mining centers. The extent of this immigration can not be stated. In Salt Lake City there was a large increase in the number of registered voters prior to the annual election in August last, which indicates a steady growth. In Ogden City, and in the mining centers of Park City, Eureka, and other places, there has also been a steady growth.

ASSESSED VALUE OF PROPERTY AND INDEBTEDNESS OF CITIES AND TOWNS.

Statement showing the assessed value of the property of the incorporated cities and towns of Utah Territory, and the indebtedness of same, for the years 1890 and 1891.

	Assessed valuation of property.		Amount of indebtedness.	
	1890.	1891.	1891.	1890.
<i>Cities incorporated under special charter.</i>				
American Fork	\$259,050.00	\$300,000.00	\$2,400.00	\$1,100.00
Alpine City	70,000.00	50,000.00	100.00	150.00
Beaver	284,878.00	280,310.00	244.79	None.
Brigham City	315,056.00	464,100.00	None	Do.
Cedar City	93,186.00	145,784.00	do	500.00
Coalville	103,000.00	215,883.80	do	None.
Corlone	179,095.00	182,000.00	2,500.00	Do.
Ephraim	131,550.00	264,540.00	2,600.00	Do.
Fairview	74,000.00	120,000.00	None	Do.
Fillmore	111,000.00	100,000.00	1,500.00	1,200.00

Statement showing the assessed value of the property of the incorporated cities and towns of Utah Territory, etc.—Continued.

	Assessed valuation of property.		Amount of indebtedness.	
	1890.	1891.	1890.	1891.
<i>Cities incorporated under special charter—Continued.</i>				
Grantsville.....	\$147,662.00	\$150,000.00	None.....	None.
Hyrum.....	121,567.00	24,000.00	do.....	Do.
Kaysville.....	219,166.00	229,635.00	\$5,000.00	\$5,000.00
Lehi City.....	277,426.00	280,000.00	None.....	None.
Logan.....	1,647,278.00	1,850,000.00	1,850.00	(*)
Manti.....	254,337.00	340,000.00	6,000.00	6,000.00
Mendon.....	45,000.00	66,000.00	None.....	None.
Moroni.....	79,189.00	91,284.00	do.....	Do.
Mount Pleasant.....	200,000.00	250,000.00	do.....	Do.
Morgan.....		207,900.00	do.....	Do.
Ogden.....	7,000,000.00	13,243,965.00	250,000.00	150,000.00
Park City.....	1,195,556.00	1,800,000.00	None.....	None.
Parowan.....	101,380.00	108,085.00	217.22	Do.
Payson.....	265,000.00	308,500.00	None.....	(†)
Pleasant Grove.....	321,000.00	350,000.00	do.....	None.
Provo.....	3,159,430.00	3,152,620.00	1,970.00	5,000.00
Richfield.....	159,539.00	177,600.00	None.....	None.
Richmond.....	75,000.00	145,000.00	300.00	Do.
Salt Lake City.....	54,353,740.00	57,065,668.00	1,000,000.00	450,000.00
Smithfield.....	153,390.00	192,210.00	537.50	937.00
Spanish Fork.....	216,890.00	237,750.00	None.....	(*)
Spring City.....	100,000.00	80,000.00	do.....	None.
Springville.....	420,000.00	680,000.00	do.....	Do.
St. George.....	249,905.00	252,098.00	2,722.28	614.00
Tooele.....	117,500.00	151,742.00	None.....	2,000.00
Washington.....	50,000.00	42,800.82	do.....	None.
Wellsville.....	114,097.00	93,000.00	do.....	Do.
Willard.....	75,135.00	98,986.45	do.....	63.00
<i>Cities and towns incorporated under general laws.</i>				
Bear River.....	15,000.00	22,430.00	None.....	None.
Fountain Green.....	79,782.00	79,782.00	do.....	Do.
Hober.....	(†)	(†)	do.....	Do.
Kanab.....	43,600.00	43,000.00	65.00	Do.
Monroe.....	75,000.00	75,652.00	do.....	Do.
Nephi.....	827,324.00	828,962.00	16,000.00	12,000.00
Salem.....	47,317.00	47,317.00	100.00	None.
Total.....	73,913,927.00	85,564,981.27	1,294,106.79	632,564.00

* No report.

† Surplus on hand.

‡ No assessment made.

The increase in municipal indebtedness for the year is 104.58 per cent. The increase in the assessed value of property within the corporate limits of the municipalities is 15.7 per cent.

REVENUE FOR 1890.

Statement of the revenue from the tax levy for the year 1890, at the rate of five mills on the dollar, for Territorial and school purposes.

Counties.	Value of property assessed.	Territorial and school tax.	Counties.	Value of property assessed.	Territorial (and school) tax.
Box Elder.....	\$3,969,438.00	\$19,847.19	Salt Lake.....	\$52,270,960.00	\$261,354.83
Beaver.....	1,004,896.00	5,024.48	Summit.....	3,794,826.00	18,974.13
Cache.....	4,062,866.00	20,014.33	San Pete.....	2,911,890.00	14,599.43
Davis.....	3,162,710.00	15,813.55	Sevier.....	1,050,644.00	5,253.22
Emery.....	1,294,920.00	6,474.03	San Juan.....	276,430.00	1,382.43
Garfield.....	366,312.00	1,831.56	Tooele.....	1,593,956.00	7,969.78
Grand.....	762,420.00	3,812.10	Utah.....	8,951,720.00	44,758.00
Iron.....	589,390.00	2,946.95	Uintah.....	582,046.00	2,910.23
Juab.....	2,305,320.00	11,526.02	Weber.....	14,631,756.00	73,308.00
Kane.....	374,794.00	1,873.97	Wasatch.....	1,086,068.00	5,430.34
Morgan.....	828,400.00	4,142.00	Washington.....	802,330.00	4,011.65
Millard.....	703,940.00	3,519.70	Total.....	108,612,216.00	543,061.08
Pi Ute.....	605,380.00	3,026.93			
Rich.....	658,730.00	3,293.65			

The assessment rolls as originally returned to the county courts gave the total valuation at \$104,758,750. This was increased to \$108,612,216.

The assessed value for 1891, as shown in the table giving the valuation for the year by counties, is \$121,146,648.37.

The tax levy for the year at the rate fixed by law, one-half of one per cent, will amount to \$600,233.44, an increase of 10.5 per cent.

Statement showing total revenue for each year from 1854, and the total assessed value of property from 1855.

Year.	Territorial and school tax.	Value of property assessed.	Year.	Territorial and school tax.	Value of property assessed.
1854	\$8,386.31	(*)	1873	\$53,870.87	\$21,518,348.00
1855	17,348.89	\$3,409,770.00	1874	57,021.45	(*)
1856	16,999.38	2,937,977.00	1875	58,222.95	23,280,180.00
1857	12,892.43	2,578,486.00	1876	50,020.11	23,608,064.00
1858	9,032.32	(*)	1877	56,384.15	22,553,660.00
1859	9,957.17	3,982,869.00	1878	146,903.77	24,483,057.00
1860	23,369.50	4,673,900.00	1879	149,910.43	24,985,072.00
1861	25,160.92	5,032,184.00	1880	151,335.24	25,222,540.00
1862	47,795.18	4,779,518.00	1881	153,495.40	25,579,234.00
1863	50,482.00	548,200.00	1882	174,483.93	26,080,656.00
1864	33,480.02	6,696,004.00	1883	185,000.55	26,834,425.00
1865	47,269.65	9,453,930.00	1884	203,549.64	31,224,942.00
1866	52,338.98	10,467,796.00	1885	208,931.72	34,851,937.00
1867	53,239.13	10,647,826.00	1886	214,105.93	35,684,322.00
1868	52,669.36	10,533,872.00	1887	227,361.48	37,893,580.00
1869	50,968.03	11,393,606.00	1888	282,636.61	40,868,247.00
1870	33,639.09	13,455,636.00	1889	305,016.14	40,883,690.00
1871	38,163.56	15,265,424.00	1890	543,061.08	108,612,216.00
1872	43,976.40	17,590,560.00			

No data from which to obtain the amount.

REAL AND PERSONAL PROPERTY AND IMPROVEMENTS, 1891.

Statement showing the assessed valuation of real and personal property and improvements in the several counties for 1891.

Counties.	Real property.	Improvements.	Personal property.	Total.	
				1891.	1890.
Beaver	\$233,705.00	\$605,690.00	\$489,727.00	\$1,329,122.00	\$1,293,850.50
Box Elder	1,078,655.00	1,841,336.00	1,174,257.00	4,094,248.00	1,821,526.00
Cache	4,757,423.00	876,630.00	524,279.00	6,158,332.00	4,076,320.00
Davis	2,413,982.00	525,575.00	556,878.00	3,496,435.00	2,686,401.00
Emery	325,793.00	7,000.00	379,494.00	1,433,786.00	909,888.00
Garfield	73,827.00	81,147.00	333,984.00	489,958.00	334,639.00
Grand	27,675.00	550,244.43	290,908.00	810,032.43	817,715.50
Iron	293,096.00	151,000.00	362,589.00	716,685.00	605,003.00
Juab	711,963.00	468,890.00	637,803.00	1,818,656.00	2,508,774.00
Kane	68,565.00	63,470.00	207,764.00	339,799.00	503,152.00
Millard	670,245.00	160,710.00	373,901.00	1,204,856.00	853,765.00
Morgan	368,375.00	377,970.00	161,375.00	907,720.00	-----
Piute	129,537.00	61,803.00	279,840.00	471,180.00	511,004.00
Rich	487,268.00	72,635.00	236,447.00	796,350.00	677,566.00
Salt Lake	39,195,819.27	6,597,095.00	13,934,558.67	59,727,472.94	52,171,000.00
San Juan	3,400.00	800.00	330,478.00	334,678.00	312,494.00
San Pete	1,349,010.00	705,870.00	521,078.00	2,575,958.00	2,588,158.00
Sevier	415,972.00	216,870.00	559,073.00	1,191,915.00	845,667.00
Summit	1,699,238.00	1,472,938.00	789,417.00	3,961,593.00	3,389,132.00
Tooele	511,425.00	271,635.00	593,368.00	1,375,428.00	1,321,505.00
Uintah	187,257.00	100,230.00	341,528.00	629,015.00	302,396.00
Utah	6,284,902.00	2,442,780.00	1,623,925.00	10,357,607.00	10,216,916.00
Washington	193,800.00	229,050.00	229,050.00	852,226.00	770,700.00
Wasatch	558,060.00	251,540.00	251,540.00	1,192,730.00	990,236.00
Weber	10,826,600.00	2,617,000.00	4,604,000.00	18,047,600.00	4,538,597.00
Total	70,411,015.27	20,234,333.43	29,787,261.67	121,146,648.37	104,758,750.00

The increase in valuation over last year is \$16,387,898.37 or 15.65 per cent.

PAPERS ACCOMPANYING THE

UNITED STATES LAND OFFICE.

*ess of the United States land office at Salt Lake City, Utah, for the
fiscal year ending June 30, 1891:*

Kind of entry.	Number.	Acreage.	Amount.
.....	226	19,160.16	\$36,293.86
.....	103	3,460.45	14,382.00
.....	134	4,354.58	1,330.00
.....	245	43,305.22	12,609.80
.....	75	17,112.80	17,873.99
.....	242	34,751.96	1,516.49
.....	373	51,415.26	5,778.54
.....	69	8,079.69	821.00
.....	1	80.00	4.00
.....	40	.....	400.00
.....	226	28,960.00	678.00
.....	45	6,560.00	153.00
.....	10	1,401.96	20,048.00
.....	5	90,991.98	1,136.00
.....	.....	.....	575.00
.....	.....	809,634.07	114,201.22

.....	Acres.
urveyed in Utah to June 30, 1891.....	12,755,475.08
urveyed and approved during fiscal year ending June 30, 1891.....	332,729.08

SETTLEMENT OF PUBLIC LANDS IN UTAH TERRITORY.

*Statement showing the disposition and settlement of public lands in Utah Territory, and
the total business of the land office at Salt Lake City from the time of its opening in
March, 1869, to the end of the fiscal year ending June 30, 1891.*

	Number.	Acreage.	Amount.
Cash entry	3,821	266,580.02	\$570,339.63
Mineral entry	1,751	18,048.2388	80,947.00
Mineral application	2,012	8,545.5938	3,893.00
Desert applications	3,341	682,478.75	178,397.75
Desert final	724	135,248.56	136,049.75
Homestead entry	9,037	10,091,142.72	140,663.71
Homestead final entry	4,709	646,809.30	30,114.63
Timber culture	1,577	179,303.49	17,902.00
Timber final	15	1,580.00	60.00
Adverse claims	888	612.05	7,515.00
Preemption filings	11,989	1,444,342.70	35,967.00
Coal filings	1,104	138,640.00	3,320.00
Coal cash entries	18	7,513,800.16	192,343.12
Central and Union Pacific selections	5	546,748.65	6,886.64
Soldiers' and sailors' scrip .....	.....	13.00	27.03
Land warrants .....	.....	23,957.00	615.00
Agricultural college scrip .....	.....	84,912.00	2,292.00
Valentine scrip .....	.....	440.00	11.00
Chippewa scrip .....	.....	80.00	2.00
Supreme Court .....	.....	4,360.02	.....
Timber sold .....	.....	.....	127.08
Timber depredations .....	.....	.....	12,632.59
Testimony fees .....	.....	.....	16,354.28
Stumpage .....	.....	.....	2,788.72
Totals .....	.....	21,887,642.2926	1,445,158.92

Number of acres under cultivation, irrigated, and under inclosure for pasture, 1890.

Counties.	Under cultivation.	Irrigated.	Under inclosure for pasture.
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
Beaver	5,558	6,350	2,161
Box Elder	20,177	0,708	35,938
Cache	54,301	30,951	23,378
Davis	23,161	10,591	12,232
Emery	14,363	13,062	3,223
Garfield	1,716	1,990	1,145
Grand	1,416	1,375	2,827
Iron	4,523	3,956	1,098
Juab	9,489	4,014	7,372
Kane	1,087	722	4,931
Millard	8,152	8,152	7,308
Morgan	5,633	5,633	3,120
Piute	7,779	9,918	3,425
Rich	15,726	26,099	16,468
Salt Lake	30,555	29,107	14,415
San Juan	809	927	2,005
San Pete	47,113	33,859	11,165
Sevier	8,118	15,340	6,185
Summit	14,508	14,500	702
Tooele	7,524	5,343	11,367
Utah	8,980	10,054	1,943
Utah	40,195	36,586	16,008
Washington	4,203	4,203	.....
Weber	22,450	17,004	17,107
Wasatch	10,824	10,365	352
Total	374,340	310,759	205,895

UNOCCUPIED LANDS—IRRIGATION CONGRESS—PUBLIC LANDS.

In my annual reports for 1889 and 1890 I referred to the unsatisfactory condition of the unoccupied public lands in the Territory (about 31,000,000 acres), now mainly used for grazing purposes, and to the necessity of improving the water supply. The grazing ranges are depreciating in value yearly and will continue to do so until some provision be made under which the title to limited tracts can pass to those who are directly interested in preserving the natural forage which grows upon them. Their condition is a matter of public concern and should receive immediate attention. The reclamation of the arid lands is of equal, if not greater importance. The amount of land which can now be irrigated in Utah is 735,226 acres. The amount which could be irrigated if the necessary work is done to increase the water supply is about 2,304,000 acres. In my last report I said—

The question of irrigation in the arid region is now receiving attention from Congress. It is now very plain that unless some artificial methods be employed the limit of cultivation will soon be reached. The water supply in these arid regions is derived from the rivers which have their source in the heart of the great mountain ranges. They are fed by the melting snows and find their way to the valleys below through deep cañons. The water is diverted from these cañon streams at or near the mouth of the cañon by means of canals and spread over the land.

Until the climate changes no other supply of water can be depended upon, for owing to the limited water surface, there is not sufficient solar evaporation to furnish the necessary rainfall.

It then becomes a matter of vital importance that something be done to store the amount of water which pours down these cañons in the fall, winter, and spring. To do this successfully will require the construction of large engineering works on a scale and at a cost far beyond the financial ability of the average settler—

and recommended that the title to the unoccupied lands "be vested in the Territory; the proceeds arising from the sales to be used for the improvement of the water supply, or as an endowment for the public schools."

During the past year the people of the West have given the problem of reclaiming the arable arid lands of the West serious consideration. It seems that if the growth of the West is to depend upon the settle-

ment of the public lands there must be some provision made to enable settlers to obtain water for cultivation at reasonable expense. There is but a small quantity of land now left, and in only few localities, for which water can be obtained without great expense. The drift of public opinion has been unmistakably in favor of the cession of the public lands, excepting the mineral lands, to the States and Territories for the purpose of developing the water supply, and in aid of the public schools.

LIVE STOCK.

Statements showing the number of horses, mules, asses, cattle, sheep, milch cows, goats, and swine assessed in Utah Territory for the years 1889, 1890, and 1891, and the assessed value for 1891.

Counties.	Horses.				Cattle.			
	1889.	1890.	1891.	Assessed value.	1889.	1890.	1891.	Assessed value.
Beaver.....	1,866	2,574	2,513	\$73,322.00	4,917	6,392	6,740	\$85,217.00
Box Elder.....	4,220	4,477	5,724	103,332.00	10,849	10,094	13,297	159,764.00
Cache.....	5,057	6,262	7,809	309,412.00	9,243	9,988	12,913	151,032.00
Davis.....	2,346	5,000	3,145	148,989.00	4,456	9,538	5,530	93,625.00
Emery.....	2,544	2,626	2,616	86,373.00	12,342	9,707	5,530	57,360.00
Garfield*.....	2,059	2,032	1,208	30,200.00	8,418	9,024	6,256	70,596.00
Grand.....	.....	1,131	1,504	36,530.00	.....	23,543	10,593	196,129.00
Iron.....	1,738	1,875	2,202	69,885.00	1,897	6,706	8,968	114,373.00
Juab.....	2,359	2,097	2,093	73,429.00	3,045	2,790	3,117	46,021.00
Kane.....	2,312	2,145	3,100	61,843.00	8,202	9,801	12,949	203,680.00
Millard*.....	3,607	4,891	3,662	67,692.00	4,875	6,206	8,805	109,713.00
Morgan.....	1,066	1,233	1,329	52,429.00	3,107	3,547	3,333	37,375.00
Pi Ute.....	2,195	2,464	2,653	59,931.00	7,323	9,415	4,582	54,486.00
Rich.....	2,542	2,369	2,174	74,343.00	11,756	9,307	8,503	106,277.00
Salt Lake.....	5,032	.....	8,438	(†)	6,226	.....	8,126	(†)
San Juan.....	780	791	1,035	29,100.00	22,054	27,392	26,362	263,625.00
San Pete.....	5,186	5,002	4,995	190,907.00	9,364	9,711	10,101	119,899.00
Sevier.....	3,415	3,902	2,790	84,767.00	8,622	10,513	14,719	185,079.00
Summit.....	2,689	3,308	2,911	134,893.00	0,480	8,845	8,966	134,378.00
Tooele.....	3,854	3,682	3,704	97,047.00	4,790	4,844	5,061	72,447.00
Utah.....	6,740	6,781	7,657	335,840.00	13,192	12,013	12,050	156,050.00
Uintah.....	6,671	3,149	3,542	97,361.00	2,851	11,494	9,469	95,439.00
Wasatch.....	1,958	2,000	2,360	90,366.00	10,614	9,383	10,211	125,285.00
Washington.....	1,686	1,905	2,397	99,575.00	9,041	10,402	10,209	131,836.00
Weber.....	3,990	4,082	4,498	184,065.00	7,333	6,841	6,976	95,900.00
Total.....	75,723	75,895	84,371	2,642,021.00	199,567	237,496	232,933	2,794,977.00

Counties.	Sheep.				Milch cows.		
	1889.	1890.	1891.	Assessed value.	Number.	Standing in order of number.	Value at \$20 per head.
Beaver.....	32,950	48,061	97,826	\$190,836.00	1,036	17	\$31,080.00
Box Elder.....	74,521	80,215	97,593	195,180.00	2,327	9	69,810.00
Cache.....	4,234	4,010	1,758	3,835.00	5,276	1	158,280.00
Davis.....	897	4,962	10,783	19,344.00	2,507	7	75,210.00
Emery.....	99,293	153,440	21,410	42,820.00	974	19	29,230.00
Garfield.....	16,026	16,311	26,402	42,243.00	1,649	13	49,470.00
Grand.....	.....	.....	14,000	24,000.00	64	25	1,920.00
Iron.....	26,312	41,642	48,967	97,079.00	1,797	12	53,910.00
Juab.....	148,900	132,220	143,611	287,314.00	2,428	8	72,840.00
Kane.....	77,879	85,346	96,025	192,050.00	1,134	16	34,020.00
Millard.....	121,555	180,088	190,000	375,000.00	934	20	28,020.00
Morgan.....	937	947	4,568	9,135.00	703	22	21,080.00
Pi Ute.....	43,229	27,440	36,735	73,538.00	1,629	14	48,870.00
Rich.....	5,651	4,201	6,640	13,280.00	861	21	25,830.00
Salt Lake.....	10,862	.....	201,536	(†)	5,095	2	152,850.00
San Juan.....	6,300	6,100	9,850	13,700.00	213	24	6,390.00
San Pete.....	45,800	2,423	103,136	210,272.00	3,885	5	116,550.00
Sevier.....	53,708	31,967	22,989	120,317.00	4,249	3	127,470.00
Summit.....	692	8,304	4,923	8,236.00	2,365	10	69,150.00
Tooele.....	237,620	180,088	162,469	250,421.00	1,021	18	39,630.00
Utah.....	69,525	63,347	101,605	182,035.00	4,190	4	125,700.00
Uintah.....	16,875	41,115	41,165	61,870.00	639	23	19,170.00
Wasatch.....	17,147	9,322	10,731	21,393.00	1,625	15	48,750.00
Washington.....	15,100	11,843	14,680	29,000.00	1,835	11	55,050.00
Weber.....	2,190	4,803	13,990	27,955.00	3,690	6	110,700.00
Total.....	1,128,113	1,156,295	1,493,392	2,490,866.00	52,666	.....	1,561,980.00

* The total assessed value of horses, sheep, and cattle in Salt Lake County is \$337,909. † Estimated.

REPORT OF THE SECRETARY OF THE INTERIOR.

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LIVE STOCK—continued.

Statements showing the number of horses, mules, asses, cattle, etc.—Continued.

Counties.	Goats.			Swine over 6 months old.		
	Number.	Standing, in order of number.	Value at \$2.50 per head.	Number.	Standing, in order of number.	Value at \$8 per head.
Beaver	1	14	\$2.50	690	9	\$5,520.00
Box Elder	9	8	22.50	751	8	6,008.00
Cache				1,792	5	14,336.00
Davis				1,443	6	11,544.00
Emery				390	17	3,120.00
Garfield	19	6	47.50	88	23	704.00
Grand				53	24	428.00
Iron				351	18	280.00
Juab	6	10	15.00	600	11	4,800.00
Kane	1,080	1	2,700.00	120	22	960.00
Millard				448	14	3,584.00
Morgan				478	15	3,824.00
Pi Ute	2	13	5.00	413	15	3,304.00
Rich	10			188	21	1,504.00
Salt Lake	22	5	55.00	1,915	4	15,320.00
San Juan				19	23	152.00
San Pete	1	14	2.50	2,067	2	16,536.00
Sevier	18	7	45.00	1,898	7	11,184.00
Summit	25	4	62.50	252	20	2,016.00
Tooele	8	9	20.00	299	19	2,392.00
Utah	4	12	10.00	1,953	3	15,624.00
Uintah	190	2	475.00	669	10	5,352.00
Wasatch	5	11	12.50	410	16	3,280.00
Washington				504	12	4,032.00
Weber	118	3	295.00	120	1	24,960.00
Total	1,508		3,770.00	20,411		163,288.00

Counties.	Mules.			Asses.		
	Number.	Standing, in order of number.	Value at \$75 per head.	Number.	Standing, in order of number.	Value at \$40 per head.
Beaver	59	9	\$4,425.00	4	11	\$160.00
Box Elder	64	8	4,800.00	1	14	40.00
Cache	67	7	5,025.00	3	12	120.00
Davis	24	16	1,800.00			
Emery	87	4	6,525.00	100	1	4,000.00
Garfield	16	19	1,200.00	7	9	280.00
Grand	10	18	1,425.00	34	2	1,360.00
Iron	9	22	675.00	10	8	400.00
Juab	59	9	4,425.00	32	3	1,280.00
Kane	11	21	825.00	14	6	560.00
Millard	47	12	3,525.00	15	5	600.00
Morgan						
Pi Ute	31	14	2,325.00	5	10	200.00
Rich	77	6	5,775.00			
Salt Lake	1,464	1	100,800.00	3	12	120.00
San Juan	25	15	1,875.00	15	5	600.00
San Pete	80	5	6,000.00	5	10	200.00
Sevier	53	11	3,975.00	11	7	440.00
Summit	20	17	1,500.00			
Tooele	57	10	4,275.00	5	10	200.00
Utah	105	3	7,875.00	2	13	80.00
Uintah	42	13	3,150.00	15	5	600.00
Wasatch	12	20	900.00	4	11	160.00
Washington	19	18	1,425.00	23	4	920.00
Weber	124	2	9,300.00	10	8	400.00
Total	2,571		192,825.00	318		12,720.00

Increase for the year:

Horses	No.	Per cent.
Sheep	8,476	10.1
	339,097	20.5

Decrease for the year:

Cattle	No.	Per cent.
	4,563	1.9

Wool clip for the year (estimated) pounds.. 12,000,000
Number of cattle exported (estimated) do.... 35,000
Number of sheep exported (estimated) do.... 310,000

PAPERS ACCOMPANYING THE

rt I said a corporation was about to be formed for the
lishing stock yards and packing-houses at Salt Lake
ration was formed, and is now engaged in preparing
ed for use.

THE MINING INDUSTRY.

atement showing the value and amount of the principal mineral product of Utah from 1875
to 1890, both inclusive.

	Refined lead.		Unrefined lead.	
	Amount.	Value.	Amount.	Value.
	<i>Pounds.</i>		<i>Pounds.</i>	
.....	2,301,276	\$103,557.42	26,315,359	\$392,095.87
.....	2,892,498	144,624.90	25,657,643	641,444.75
.....	2,645,373	145,495.51	38,222,185	955,554.62
.....	8,213,798	410,090.00	52,340,850	1,361,096.00
.....	3,230,547	161,527.00	63,431,064	1,585,790.00
.....	4,840,937	169,434.54	56,023,803	980,418.12
.....	.....	.....	54,318,776	1,222,176.46
.....	208,800	9,067.44	48,456,260	1,405,231.54
.....	2,500,000	111,750.00	45,678,061	1,196,788.77
.....	.....	.....	44,567,157	1,203,313.23
.....	2,359,540	89,662.52	59,421,730	1,378,584.13
.....	5,082,800	203,312.00	63,181,817	1,895,454.81
Total	34,273,619	1,549,721.32	577,625,595	14,417,953.70

	Silver.		Gold.		Copper.	
	Amount.	Value.	Amount.	Value.	Amount.	Value.
	<i>Ounces.</i>		<i>Ounces.</i>		<i>Pounds.</i>	
1879.....	3,732,247	\$4,106,351.70	15,732	\$298,908.00	.....	.....
1880.....	3,663,183	4,629,501.30	8,020	160,400.00	.....	.....
1881.....	4,958,345	5,593,762.95	6,982	139,640.00	.....	.....
1882.....	5,435,444	6,114,874.00	9,039	180,780.00	605,880	\$75,735.09
1883.....	4,531,763	4,984,939.00	6,991	139,820.00	.....	.....
1884.....	5,609,488	6,123,047.04	5,530	110,600.00	63,372	8,337.20
1885.....	5,972,689	6,221,596.56	8,003	178,060.00	.....	.....
1886.....	5,918,842	5,860,837.34	10,577	211,540.00	2,407,550	144,453.00
1887.....	6,161,737	5,976,884.80	11,387	227,740.00	2,491,320	124,566.00
1888.....	6,178,855	5,787,527.51	13,886	277,720.00	2,886,816	288,681.60
1889.....	7,147,651	6,656,254.65	24,975	499,500.00	2,060,702	206,079.20
1890.....	8,165,586	8,492,209.44	33,851	677,020.00	956,708	76,536.64
Total	67,535,830	69,848,786.48	155,873	3,101,728.00	11,472,438	922,388.64

INCREASE OVER 1890.

	Per cent.
In pounds of unrefined lead.....	6.33
In pounds of refined lead	115.33
In ounces of silver	14.10
In ounces of gold	25.53

DECREASE.

In pounds of copper	115.40
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METAL PRODUCT FOR 1890.

Wells, Fargo & Co.'s statement of the mineral product of Utah for 1890.

[Furnished by Mr. J. E. Dooley, cashier.]

	Copper.	Lead.		Silver—		Gold—	
		Refined.	Unrefined.	In bars.	In base bullion and ores.	In bars.	In bullion and ores.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Ounces.</i>	<i>Pounds.</i>	<i>Ounces.</i>	<i>Ounces.</i>	<i>Ounces.</i>
Germania Lead Works	257,370	5,082,800	2,198,776	418,526	91,544	8,728	1,080
Hanauer Smelter	150,000		8,240,000		710,250		4,170
Mingo Furnace Co.	530,538		10,075,171		1,251,986		12,987
Daly Mining Co.			1,417,274		629,675	481	216
Ontario Silver Mining Co.			3,204,578		985,221		1,090
Silver Reef District ..	18,900				42,513		
Other mines and placers ..					5,816	87	
Net product bars and base bullion	956,708	5,082,800	25,125,799	2,082,761	3,024,973	4,296	19,493
Contents ores shipped			32,046,018		3,057,952		10,062
Totals	956,708	5,082,800	68,181,817	2,082,761	6,082,825	4,296	29,555

RECAPITULATION.

956,708 pounds copper at 8 cents per pound	\$76,536.64
5,082,800 pounds refined lead at 4 cents per pound	203,312.00
63,181,817 pounds unrefined lead at \$90 per ton	1,895,454.51
8,185,586 ounces fine silver at \$1.4 per ounce	8,492,208.44
23,851 ounces fine gold at \$20 per ounce	677,020.00
Total export value	11,844,882.60

Computing the gold and silver at their mint valuation, and other metals at their value at the seaboard, it would increase the value of the product to \$14,346,783.33.

Comparative statement showing the quantity of silver and gold contained in base bullion produced in Utah.

Year.	Silver produced.	Gold produced.	Silver in ores and base bullion.	Gold in ores and base bullion.	Silver product.	Gold product.
	<i>Ounces.</i>	<i>Ounces.</i>	<i>Ounces.</i>	<i>Ounces.</i>	<i>Per cent.</i>	<i>Per cent.</i>
1877	4,359,703	17,325	2,102,098	11,035	48.2	63.6
1878	4,357,328	15,040	2,108,359	10,165	48.3	67.5
1879	3,835,047	15,032	1,797,589	5,693	46.8	35.7
1880	3,783,566	8,020	1,403,819	2,878	37.1	35.8
1881	5,400,101	7,958	2,643,899	2,632	48.9	32.9
1882	5,435,444	9,039	2,581,789	5,016	47.3	55.5
1883	4,531,763	6,991	2,351,190	5,597	51.8	80
1884	5,669,488	5,530	3,253,984	3,806	57.4	68.8
1885	5,972,689	8,903	3,180,576	7,289	53.4	81.8
1886	5,918,842	10,577	2,838,263	8,369	47.9	79.1
1887	6,161,737	11,387	5,049,273	10,714	65.7	94
1888	6,178,855	13,886	3,982,217	12,954	64.4	92.6
1889	7,147,651	24,975	5,270,250	24,236	73.7	97
1890	8,165,586	33,851	6,082,825	29,555	74.4	87.3
Total	76,017,800	189,414	44,655,131	139,929		

In my last report I expressed the opinion that—

The action of Congress in passing the silver bill and the anticipated legislation imposing a tariff on lead ores imported from other countries has had a stimulating and beneficial effect, and it is probable the West is about to experience a revival of the mining industry on an extensive scale.

PAPERS ACCOMPANYING THE

SCHOOLS AND CHURCHES.

number of schools established and maintained by religious denominations, excepting the Church of Jesus Christ of Latter-Day Saints, for the years 1890 and 1891.

Denomination.	1890.			1891.		
	Schools.	Teachers.	Pupils.	Schools.	Teachers.	Pupils.
Methodist	24	35	1,767	25	38	1,400
Protestant Episcopal	6	23	550	5	18	500
Catholic	7	40	800	6	50	800
Congregational	24	50	2,380	21	45	2,209
Swedish Lutheran	1	3	60	(*)		
Baptist				(*)		
Presbyterian	32	61	2,250	31	61	1,935
Total	94	212	7,807	88	212	6,904

* No report, on account schools discontinued.

Statement showing the number of churches and ministers maintained by religious denominations, excepting the Church of Jesus Christ of Latter-Day Saints, for the years 1890 and 1891.

Denomination.	1890.		1891.	
	Churches.	Ministers.	Churches.	Ministers.
Methodist	28	23	33	26
Protestant Episcopal	8	7	8	7
Catholic	10	14	6	15
Congregational	5	8	5	8
Swedish Lutheran	5	4	6	4
Baptist	2	4	(*)	
Presbyterian	15	21	17	19
Total	73	81	75	79

* No report.

DENOMINATIONAL SCHOOLS.

Statement showing the amount expended for schools by the various religious denominations, excepting the Church of Jesus Christ of Latter-Day Saints, prior to June 30, 1890, and during 1891.

Denomination.	Expended for schools to June 30, 1890.	Expended maintaining schools, 1891.	Expended for school grounds and buildings, 1891.	Total expended for schools.
Methodist	\$324,000	\$20,600	\$5,000	\$349,600
Protestant Episcopal	(*)	15,000	(*)	
Catholic	373,000	40,000	60,000	473,000
Congregational	341,189	40,000	5,000	386,189
Swedish Lutheran	10,500	(†)		
Baptist	(*)	(†)		
Presbyterian	335,000	29,750	9,500	374,250
Total	1,389,669	145,350	79,500	1,563,019

* No report.

† Schools discontinued.

REPORT OF THE SECRETARY OF THE INTERIOR. 773

Statement showing the amount expended for churches by the various denominations, excepting the Church of Jesus Christ of Latter-Day Saints, prior to June 30th, 1890, and in 1891.

Denomination.	Expended for grounds and buildings and maintenance.		
	To June 30, 1890.	1891.	Total.
Methodist	\$178,000	\$39,500	\$217,500
Protestant Episcopal	(*)	(*)	(*)
Catholic	103,000	10,000	113,000
Congregational	20,000	(*)	20,000
Swedish Lutheran	32,700	13,200	45,900
Baptist .....	(*)	(*)	.....
Presbyterian	61,000	28,700	89,700
Total	394,700	91,400	486,100

* No report.

UTAH SUGAR MANUFACTORY.

On the border line of Lehi and American Fork cities, in Utah County, Utah, there has been erected what is said to be the largest sugar manufactory in the United States, and equipped with machinery of American manufacture, at a cost of some \$500,000. It was built by a corporation formed under the laws of Utah. The stock is owned by citizens of Utah. The sugar will be manufactured from the beet root. The soil of Utah in some places is said to be especially adapted to the cultivation of the sugar beet.

WAGES PAID AND HOURS EMPLOYED.

The following statement will show the rate of wages paid for certain kinds of labor and the hours employed:

Name of trades.	Wages per month.	Wages per week.	Wages per day.	Hours employed.
Bricklayer	\$5.00 to \$6.00	8
Brickmakers	2.50 3.00	9
Blacksmiths	3.50 4.00	9
Brewers	\$65.00 to \$70.00	.....	.....	10
Barbers	\$15.00 to \$20.00	.....	10
Boot and shoemakers	2.75 3.00	10
Clerks	60.00 100.00	.....	.....	10
Cooks and waiters	40.00 75.00	.....	.....	10
Carpenters	3.50 4.00	10
Cigar-makers	20.00 25.00	.....	9
Harness-makers	2.25 2.75	9
Hod-carriers	3.00 3.50	8
Iron molders	3.00 3.50	9
Lathers	3.00 3.50	9
Laborers	2.00 2.50	9
Linemen	3.00 3.50	8
Machinists	3.50 4.00	9
Printers	20.00 25.00	.....	9
Plumbers	4.00 4.50	8
Painters	3.50 4.00	9
Plasterers	4.00 4.50	8
Stonecutters	4.00 4.50	8
Stone masons	4.00 4.50	8
Steam and gas fitters	4.00 4.50	8
Street-car employes	2.00	9
Tinners and cornice-makers	3.50 4.00	9

PAPERS ACCOMPANYING THE
THE RAILROAD SYSTEM.

The system of Utah is herewith given:

Route	From—	To—	Miles of line.	
			Gauge, 4 feet 8½ inches.	Gauge, 3 feet.
Utah Central:				
line in Utah	Ogden	Wyoming line	78	
do	do	Frisco	280	
do	Lehi City	Eureka	62	
do	Echo	Park City	31	
do	Ogden	Idaho line	96.3	
do	Salt Lake City	Terminus		87
do	Nephi	do		34
Total			542.3	121
Utah Western:				
do	Colorado line	Ogden	310.1	
do	Bingham Junction	Bingham	16.3	
do	do	Alta	18.2	
do	Pleasant Valley Junction	Coal mines	17.3	
do	do	Payson	6.1	
do	do	do	9.1	
Total			377.1	
Utah Pacific:				
line in Utah:				
main line	Ogden	Nevada line	157	
Total			157	
Utah Central	Salt Lake	Fort Douglas		6
do	do	Park City		31
do	do	Mill Creek		3
Total				40
Grand total			1,070.4	111

Street-railroad system.

	Electric.	Steam motor.
	Miles.	Miles.
Salt Lake	60½	
Ogden	6	9
Provo		6
Total	66½	15

Increase in railroad mileage, standard gauge, 110.4 miles Decrease, narrow gauge, 76 miles.

POLYGAMY.

In my report of September 9, 1890, I discussed at some length the statements which had been put forth to the effect that the Mormon Church had refused some time previous thereto to sanction polygamous marriages, and, referring to the unsatisfactory character of the evidence furnished, said:

Under its system of government the church has but one way of defining its position, and that is by a public declaration either from the head of the church addressed to the people or by the action of the people in conference assembled. No such declaration has ever been made nor action taken, and probably never will be. There is no reason to believe that any earthly power can extort from the church any such declaration.

It may be truthfully said that the church has determined that if polygamy is to be uprooted the Government must perform the task, as it will never do on its part any act that will indicate an abandonment of polygamy.

My opinion was based upon the course of the Mormon people in the past. I do not think there is anything in their history up to the date of the report which would have justified any one in saying they had abandoned a practice which they declared to be a vital part of their religion in the following emphatic language:

Among the principles of our religion is that of immediate revelations from God. One of the doctrines so revealed is celestial or plural marriage, for which ostensibly we are stigmatized and hated. This is a vital part of our religion, the decisions of courts to the contrary notwithstanding.

I accepted this as being a correct statement of their position. It was only corroborative of the opinion which it seems to me every man would have formed who had studied their history. I believed they were sincere in supporting polygamy, and would remain so, and said so.

On September 25, 1890, sixteen days after I filed my report, the president of the church issued the following proclamation or manifesto:

To whom it may concern:

Press dispatches having been sent for political purposes from Salt Lake City, which have been widely published, to the effect that the Utah Commission, in their recent report to the Secretary of the Interior, allege that plural marriages are still being solemnized, and that 40 or more such marriages have been contracted in Utah since last June or during the past year; also that in public discourses the leaders of the church have taught, encouraged, and urged the continuance of the practice of polygamy:

I, therefore, as president of the Church of Jesus Christ of Latter Day Saints, do hereby, in the most solemn manner, declare that these charges are false. We are not teaching polygamy, or plural marriage, nor permitting any person to enter into its practice, and I deny that either 40 or any number of plural marriages have during that period been solemnized in our temples or in any other place in the Territory.

One case has been reported, in which the parties alleged that the marriage was performed in the endowment house, in Salt Lake City, in the spring of 1889, but I have not been able to learn who performed the ceremony; whatever was done in the matter was without my knowledge. In consequence of this alleged occurrence the endowment house was, by my instructions, taken down without delay.

Inasmuch as laws have been enacted by Congress forbidding plural marriages, which laws have been pronounced constitutional by the court of last resort, I hereby declare my intention to submit to those laws, and to use my influence with the members of the church over which I preside to have them do likewise.

There is nothing in my teachings to the church or in those of my associates, during the time specified, which can be reasonably construed to inculcate or encourage polygamy, and when any elder of the church has used language which appeared to convey any such teaching he has been promptly reprov'd, and I now publicly declare that my advice to the Latter Day Saints is to refrain from contracting any marriage forbidden by the laws of the land.

WILFORD WOODRUFF,

President of the Church of Jesus Christ of Latter Day Saints.

And on October 6, 1890, twenty-seven days after, at the general conference of the church, on motion of Lorenzo Snow, an apostle of the church, the action of the president was indorsed, and the manifesto accepted by the people in the following language:

I move that, recognizing Wilford Woodruff as the president of the Church of Jesus Christ of Latter Day Saints, and the only man on the earth at the present time who holds the keys of the sealing ordinances, we consider him fully authorized by virtue of his position to issue the manifesto which has been read in our hearing and which is dated September 24, 1890, and that, as a church in general conference assembled, we accept his declaration concerning plural marriage as authoritative and binding.

The unexpected had happened, and the president and people had taken action in the most authoritative way. This was an event which

can not fail to vitally affect the future of the Territory. The addresses made to the people at the time the proclamation was ratified should be read in connection with the proclamation in order to understand the force of this action in prescribing a rule of conduct to the Mormon people. It is generally known that the doctrine of polygamy rested on a supposed revelation to Joseph Smith, the founder of the sect, and so long as this revelation remained unrevoked and not suspended, to the orthodox Mormon it was superior to any human laws in conflict with its scope and meaning, and while he might submit to the force of a conflicting law, he never could give it more than a passive obedience.

This proclamation, in the proceedings of the conference, is not called a revelation, and, perhaps, it is not considered as strictly such, but it is distinctly asserted it is put forth by permission of the Lord, granted in answer to prayer on the subject, and by the only man on earth who holds the keys of the sealing power. Whether it is put forth as a command from the Lord or only as permissive I have no doubt that, as they have been led to believe it was put forth by divine sanction, it will be received by the members of the Mormon Church as an authoritative rule of conduct, and that, in effect, the practice of polygamy is formally renounced by the people.

At the general conference October 6, 1891, action was taken reaffirming the action of October 6, 1890, with respect to polygamy. The action of the Mormon people has not wholly removed doubts in the minds of some as to its sincerity or finality, and it is urged that it is not a revelation, but is revocable, and with the power and opportunity given it would be revoked; that it does not advise obedience, but only submission. When the Mormon people declared at a general gathering that polygamy was a vital part of their religion I accepted their action as a sincere expression of their views. Now that they have in the same public way resolved to refrain from violating the law prohibiting polygamy in the future, I think their action should be regarded as sincere until there is good reason for thinking otherwise. Every non-Mormon has believed the time must come when polygamy would be renounced. No one believed it could perpetually withstand the power of the law, the influence of the age, and comparison with its surroundings, and there is nothing strange in believing the time has come for the fulfillment of this expectation.

The only danger which threatens the situation is the possibility of immediate statehood, which I have discussed elsewhere.

POLITICAL ACTION.

While in every other portion of the country the people have united with some one of the great national parties, the Mormon people of Utah, from the date of their first settlement in the Territory on July 24, 1847, down to the present year, have had their own political organization, and have acted as a unit in political matters. They neither acknowledged nor professed allegiance to any national political party.

* * * * *

UTAH COMMISSION.

It is stated that at the coming session of Congress an effort will be made to abolish the Utah Commission.

The demand will come from persons who have never been in sympathy with the law creating the Commission, or with the work of the Commission under the law.

In its sphere the Commission has performed efficient work and has been a valuable auxiliary to the work of other Federal departments in Utah. It is well to remember that the non-Mormons of Utah are not in sympathy with the demand, but desire that the Commission shall be retained.

I am, sir, very respectfully,

ARTHUR L. THOMAS,
Governor.

Hon. JOHN W. NOBLE,
Secretary of the Interior, Washington, D. C.

REPORT OF THE GOVERNOR OF OKLAHOMA.

TERRITORY OF OKLAHOMA, EXECUTIVE OFFICE,
Guthrie, October 9, 1891.

Hon. JOHN W. NOBLE,
Secretary of the Interior,
Washington, D. C.:

DEAR SIR: I arrived in this city on May 22, 1890, after my appointment as governor on the 15th of the same month, and found county seats established without county boundaries which, under your instructions, I proceeded to define.

Finding no civil officers to carry out the provisions of the Nebraska law, under which we were to operate in pursuance of the organic act, I at once appointed the county officers for the various counties.

POPULATION 1890.

For the purpose of ascertaining the population, under the provisions of said act, I next selected and appointed enumerators, who, I think, very carefully performed their work, when the population of the Territory was ascertained to be 60,417, aside from Greer County, as follows:

First county (now Logan).....	14,254
Second county (now Oklahoma).....	12,794
Third county (now Cleveland).....	7,011
Fourth county (now Canadian).....	7,703
Fifth county (now Kingfisher).....	8,837
Sixth county (now Payne).....	6,836
Seventh county (now Beaver).....	2,982

Divided as follows:

Whites.....	57,117
Colored.....	3,289
Chinese.....	11
Males.....	34,464
Females.....	25,953
Guthrie, county seat of Logan County.....	5,884
Oklahoma City, county seat of Oklahoma County.....	5,086
Stillwater, county seat of Payne County.....	625
El Reno, county seat of Canadian County.....	519
Norman, county seat of Cleveland County.....	764
Kingfisher, county seat of Kingfisher County.....	1,278
Beaver City, county seat of Beaver County (not separately enumerated).....	

LEGISLATIVE ASSEMBLY.

An apportionment for legislative purposes was made, election districts defined, election officers appointed, and on the 5th day of August, 1891,

an election was held for the purpose of electing members of the first legislative assembly of the Territory. Unfortunately, two members elect died before a call was made for the members to assemble, viz: Representative Burke, of Oklahoma County, and Representative Reynolds, of the Territory-at-large (excepting Beaver County); so that a second election was made necessary, which was held without changing the political results, and on August 27, 1890, after proper notice, the first legislative assembly of the Territory met for a 120 days' session at Guthrie; but until within a very few days of the time fixed for the session to close, comparatively little was accomplished. However, in the short time remaining, by unusual diligence and judicious selection, a very fair code of laws was enacted.

SETTLEMENT OF LANDS.

Upon my arrival in the Territory (a year and a month after it had been opened to settlement) I found prosperous little cities and towns and every quarter section of land opened to settlement was occupied; in too many instances there were two settlers claiming the same quarter, and in some instances as many as five were upon a quarter, all claiming it. It was at this time I was first made aware of the real application of the word "Sooner," meaning here "the man or woman claiming land who had come into the Territory prior to the time fixed by the President's proclamation, April 22, 1889." The law, or proclamation of the President, enabling settlers to enter the Territory did not come in time to permit of their growing crops in 1889. The year 1890 being an unusually dry one, not only in Oklahoma but in many of the older States, was fatal to the growing crops for that year, which, taken with the fact that a large portion of the population had been driven out of southwestern Kansas and northwestern Texas on account of drought, or had been kept waiting on the border until they had exhausted their resources, caused great destitution and suffering and forced us to make an appeal to Congress for assistance, which met with generous response, and which, with the assistance of the railroads leading into the Territory and the free labor and contributions of many of its citizens, enabled us to get along until the bountiful crop of garden and field products of the present year were ready for use.

SEED WHEAT FURNISHED BY RAILROADS.

It is proper for me to mention in this connection that on account of the great scarcity of wheat and on account of the lack of means in the hands of the settlers to buy it I appealed to the management of the Atchison, Topeka and Santa Fé and to the Chicago and Rock Island railroads to each send us \$10,000 worth of wheat, to be paid for when the crop was harvested this year, and they generously and promptly responded and furnished the wheat along their respective lines to the settlers at actual cost, free transportation, and without interest. I am pleased to remark that the companies are highly gratified at the promptness with which these obligations have been met, and the settlers are (and ought to be) unusually gratified; a majority of whom, on account of being without feed for their stock, pastured the growing wheat up to as late as the 1st of April—in a few instances later—and by June 1 to June 10 put in shock a crop yielding from 20 to 30 bushels to the acre.

AGRICULTURAL PRODUCTS.

It may be well for me to state here that corn and cotton, and in fact all kinds of agricultural products planted and cared for, have yielded bountifully. There is no doubt at all but that this is an excellent agricultural country, and for fruit and berries exceptionally good. The lands are being developed as fast as the settlers are able to do so.

STOCK-RAISING.

Stock-raising is not carried on to any great extent up to the present time, excepting in Beaver County (formerly No-Man's-Land), and where (until this year) it has been supposed it was too dry for agricultural purposes; and it is my opinion now that we will have to wait a little season before it will do to claim Beaver County as safe for agricultural purposes, the rain belt not having extended quite so far west as to be relied upon; however, stock of all kinds do unusually well here, more especially horses and cattle. I have not seen or heard of a horse with the "heaves," nor is there a disease of any kind among them; so that it is fair to conclude that as fast as our people become able to do so, stock-raising will be carried on hand in hand with agriculture.

MINING.

Little attention has been given to mining up to the present time. Mineral paint of superior quality has been found; also coal, asphaltum, and coal oil. Some very fine specimens of lead and silver ore have been shown me, which were found in the Territory, in that portion not open to settlement, but which ought to be and at a very early period.

TIMBER.

While Oklahoma can not be classed as in the lumber region, we have enough of timber (excepting pine) for all purposes, and, if properly protected, to supply us for years to come, comprising walnut, oak, pecan, hickory, and in fact in different parts of the Territory may be found nearly all varieties of timber, and we have only to plant and keep the fires from sweeping through the country to have within a very few years beautiful groves of thrifty trees.

LEASING SCHOOL LANDS.

By direction of the Secretary of the Interior, I have, under section 36 of act approved March 3, 1891, leased for 3 years 584 of the 656 quarter sections of school lands in the six counties aside from Beaver, realizing therefor \$4,536.82 in cash, and \$47,642.85 by note with approved security. Only about 16 quarter sections have been leased in Beaver County, and those at a very small rental, for the reason, principally, that they are pasture lands rather than agricultural, and that very few people care to bother with so small a tract as 160 acres, so that I agree with the secretary of the Territory, and recommend that authority be given to rent as much as a section of school land in Beaver County. The leasing of the lands in the Territory proper (more particularly) will yield a considerable revenue for school purposes, which will be greatly needed for a few years to come, and at the same time the cultivation will materially increase their value. The running of these lands to pasture by the Indians so many years has in no wise improved them; the plow and the hoe of the white man will.

SCHOOL FUND, AND WHY NEW COUNTIES SHOULD BE ASSISTED.

Under section 26, organic act, approved May 2, 1890, \$50,000 was appropriated "to be expended by the governor in temporary support and aid of common-school education in said Territory as soon as a system of public schools shall have been established by the legislative assembly." The school system was not provided for by the legislature until late in its session, and as a consequence several districts in the Territory failed to organize in time to have any schools, and others only short terms; \$37,381 was expended for the salaries of teachers, and \$182 for blanks, vouchers, certificates, etc., leaving a balance on hand of \$12,237, which will go to teachers in districts where they had no schools, or where they did not have full terms. It was decided best to not permit this \$50,000 to go towards building schoolhouses, payment of trustees, school directors, county superintendents, or in fact for any purpose other than the pay of teachers, and for the necessary blanks to be used in connection with the schools by the secretary of the Territory, who pays out the money at my request and subject to my approval.

I am very sorry indeed that provision was not made by Congress for helping the settlers support the common schools in the Sac, Fox, Iowa, Pottawatomie, and Absentee Shawnee lands recently thrown open to settlement, for those settlers are not only poor people, as were those who came into this part of the Territory, but they will have the additional burden of caring for the Indian children in great numbers who may attend the common schools, and notwithstanding the fact that the lands or personal property of these Indians may not be taxed to help support the schools. This will be true with reference to the Cheyenne, Arapahoe, and Kickapoo country, which, it is hoped, will be thrown open to settlement early next spring. It seems to me there is more reason for helping the settlers support the schools in these lands than there was in Oklahoma proper, for here on every quarter is a white settler who will pay tax, while on the Indian lands recently treated for, that have been (or soon will be) thrown open to settlement, a large proportion of the most valuable quarter sections are occupied by Indians. I earnestly recommend that this matter be brought to the attention of Congress with the hope that proper relief may be granted.

CHEROKEE OUTLET.

Nothing I think of would be more gratifying to the people of not only Oklahoma, but to those of Arkansas, Missouri, Texas, Kansas, etc., who are anxious for homes, than would be the opening of the Cherokee Outlet; there is every reason why it should be thrown open to settlement, and none (that I know of) why it should not be. If the commission created by Congress shall fail to treat with the Cherokees for these lands, and shall so report to Congress during its next session, I trust Congress may enact a law that will open them. Should Congress fail to do so, from any cause, I earnestly hope the President may declare them open by proclamation. Forbidding the use of these lands for "cow pasture" or for "quarry purposes" is a long step in the right direction and highly appreciated by the home-seeker. If they may be bought "for the use of friendly Indians at 47 cents an acre" from the Cherokees, I see no reason why the Cherokees, 70 miles away, should object to white people settling them at the same price, and if they do object I see no reason why we should not take them anyhow, at not exceeding the above price. From the west line of the Cherokee coun-

try to the west line of the lands sold to the Poncas, Otoes, Missourias, Tonkawas, Pawnees, Kansas, and Osages by the Cherokees is 70 miles, thus cutting themselves off from the unsold portion by this distance, and utterly abandoning its use for the purpose intended by the treaty.

OPENING TOWN SITES.

I hope before any other lands are thrown open to settlement the town sites will be carefully selected, surveyed, platted, and published, and I urgently recommend a different mode of opening town sites to settlement. At the recent opening of Tecumseh and Chandler there were at least five thousand people at each place waiting for the signal to be given for entering said town sites containing twenty-four hundred lots, good and bad. A very large proportion of those intending to enter the sites were anxious to go in on foot, to avoid the danger incident to riding in on horseback or in wagons and vehicles of various kinds; but there is no law to compel them to do so or for punishing them if they did so had they been ordered not to; one man was killed by his own horse falling on him; others were more or less injured, generally (if not altogether) the horseman by his own horse; but the real settlers are in too many instances deterred from attempting to get a lot or a home from the very fact that horsemen are allowed to ride in.

Every man (and woman for that matter) who can be at these openings and enjoy the excitement is there, hoping in the mad rush he or she may get a lot, or a block of lots, and sell to some party really intending to settle. Lawyers without clients abound; bankers without banks or capital are there; real-estate speculators without customers; gamblers, whisky-peddlers, and boot-leggers, all before the opening are there to ply their vocations, and where the land is opened to settlement before the town site, the settler who has gone upon his land and made "substantial improvements" (by cutting down a small tree and using the limbs for three sides, and the body, or trunk, for the other) is on the ground ready to join in the mad race with all these before named, against the real settler, who intends to make a home on the site and who generally gets a home there by paying for it. In short, I think if the lots were sold at even a low valuation, those who really intend to settle for business or for a home may, by getting together, buy their property at a reasonable price, and those who go there for speculative purposes may take their chances.

A limit could be fixed to the number of lots a party may have, the same as now, with the condition to improve it, etc., as now; money derived from the sale of lots, it should be provided, must first go to the improvement of streets and digging town wells; the balance, after paying necessary expenses, etc., as now, should go into the school fund. This plan would, by whatever amount the speculator puts in, be a gain to the town either by the improvements before alluded to, or by the increase of its school fund. The class of men hovering about the town sites at the opening of these lands for settlement, for speculative purposes, are not confined to Oklahoma by any means; in fact, comparatively few of them are residents of the Territory, but it seems to be a business with a large class of "nothing-else-to-do" people to attend these openings, from far and near.

LANDS TREATED FOR NOT OPEN TO SETTLEMENT.

On account of a great many of the Indians refusing to take their allotments, much delay has been caused in the allotting of lands to the

Cheyennes and Arapahoes, and I am informed that the appropriation for making these allotments is practically exhausted. Unless it is possible to make other arrangements to throw these lands open to settlement early next spring so that settlers may raise a crop next year, it will mean great hardship, destitution, sickness, and death among the hundreds of settlers who have been along its borders for weeks, and in many instances months, waiting for homes; they are being joined by hundreds more, who have been waiting around the border of the lands on the east recently opened to settlement, for months, to get homes there, but on account of there not being nearly as many quarter sections as there were settlers they were disappointed. On account of treaties having been made and published to the country, these settlers had a right to expect they might settle new homes in the Territory this fall; to keep them waiting until spring will be sad enough to many of them, but to keep them waiting still a year longer (as they will be unless arrangements are made for continuing the allotments) will be cruelty in the extreme; they have broken up their homes back East, or South, or North, and in many instances they are now unable to return if they desire to do so, and they would be afraid to go away not knowing when the lands will be opened. If there ever was an emergency demanding prompt action I am sure there is one upon us here, and it is not at all likely that Congress will fail to recognize this condition of affairs and sustain any necessary action on your part. The Indians are now wanting their allotments, and those who did not join in refusing to take them, or were kept from taking them through fear of violence, have a right to them under the terms of the treaty, and it is important for them to get their new homes and enter upon the new order of things contemplated for them. I am sure early and prompt relief will be given.

PRESENT POPULATION.

Since the enumeration in 1890 there has been a constant influx of people; 600 quarter sections of school lands have been settled upon by not less than 2,500 souls; two large counties on the east have been opened to settlement and, so far as I am advised, every quarter section taken, and it is safe to say there are 10,000 people there now; and by early spring, when the settlers' families have joined them, the population will have reached 15,000. Families have been joining the settlers in the Territory proper, and there are quite as many people here now waiting for homes as there were in 1890; so that I feel justified in saying that our population is not under 80,000.

I wish to testify to the fact that the citizens of Oklahoma are, as a people, unusually intelligent, above the average in education, generous, industrious, and God-fearing.

I hand you with this a report by the secretary of the Territory and by the Territorial auditor, the latter comprising the commerce on the Rock Island Railroad; that of the Santa Fé (traversing considerable more territory, and being a through road, greatly exceeds that of the Rock Island), asked for, has not been received; a second request has been made for it, and I hope it may reach you in time for use.

Very respectfully,

GEO. W. STEELE,
Governor.

REPORT OF THE GOVERNOR OF ALASKA.

EXECUTIVE OFFICE,
Sitka, Alaska, October 1, 1891.

SIR: I have the honor to submit my third annual report of my official acts, of the administration of the government, of the operations of law and of the condition of the District of Alaska, especially as to its resources, industries, population, schools, churches, progress in civilization, and such matters appertaining to its needs as have come under my observation for the year ending on the 30th day of June, 1891.

The peculiar physical features of the Territory of Alaska sufficiently account for many of the anomalous conditions of life and business, and the operations of law, when they are understood. It is a country of vast extent, covering an area of about 580,000 square miles, nearly one-sixth of the whole territory of the United States, extending from south to north from latitude $54^{\circ} 40'$ ($16\frac{2}{3}$ degrees) to latitude $71^{\circ} 20'$, and from east to west from 130° west longitude ($57^{\circ} 20'$) to $172^{\circ} 40'$ east longitude.

The mainland consists of a strip of land 30 miles wide, along the coast from Portland Canal on the south to the one hundred and forty-first meridian of west longitude, in the vicinity of Mt. St. Elias, and all of the continent lying west of the one hundred and forty-first meridian north from Mt. St. Elias to the Arctic Ocean. Along the coast in southeastern Alaska is an almost continuous chain of precipitous mountains from 3,000 to 5,000 feet in height, but rising to a much greater height in the White and Mt. St. Elias ranges. Among these mountains, which occupy the whole of the mainland in this part of the Territory, are numerous valleys, and at their feet there are comparatively narrow areas of level or gently rising lands, which are covered with dense forests of spruce, hemlock, and cedar trees, with almost impenetrable thickets of smaller growths. These forests furnish wood and timber, the value of which is yet to be determined. From Mt. St. Elias to the western point of the Alaska peninsula at Iassanotski Strait, with the exception of a section of country about Cook Inlet, which is quite level, the coast region is very much broken and mountainous, though with few exceptions the mountains are not so precipitous as in the southern portion, and the timber becomes smaller and less valuable until the forest growth ceases from a point in the vicinity of Kadiak Island westward. The interior of Alaska beyond the coast mountains is less elevated for the most part, and contains extensive plains and hilly country about Bering Sea and adjacent to the Arctic Ocean. It also embraces the vast valley of the Yukon and other extensive river systems, which are in part wooded. There are but few prominent mountains in the interior.

In addition to this mainland there are embraced within the Territory of Alaska some 1,100 islands, varying in size from those containing areas of hundreds of square miles to those containing a few acres. The islands of southeastern Alaska are very mountainous and broken, and all the mountains of more than 2,000 feet in height are covered with snow at all seasons of the year.

Among these islands, and extending far into the mainland, are numerous deep-sea channels which serve as highways of travel and commerce, and these salt-water ways are supplemented by immense rivers like the Yukon and its branches, the Kuskokwim, the Nushagak, the Copper, the Stikine, Noyatak, Colville, and the Kowak, which afford

facilities for transportation and travel from the interior, and without which communication with a large portion of the Territory would be well-nigh impossible.

In discussions upon the subject of establishing facilities for communication and travel in parts of the country remote from the seaboard and not near the water ways to which reference has been made, all natural obstructions like glaciers and the frozen tundra of the Arctic region must be taken into consideration. Through the mountain regions of southeastern Alaska glaciers are numerous, and among the mountains of Alaska peninsula only a little less so. It has been officially reported that above 60 glaciers can be seen from the waters of Lynn Canal, while the larger glaciers of Glacier Bay, and the Fairweather and Mount St. Elias ranges are matters of record. The tundra lands of the Arctic region and in the Yukon valley a few miles back from the river afford no wood or timber, and give little promise of future cultivation or use for purposes of raising stock. Under the thick coat of sphagnum growth is a deposit of peaty substance, or soil, of poor quality, owing to the presence of only partially decayed vegetation, and this substitute for soil is frozen solid to a considerable depth and protected from the influence of the hot sun of the summer by its mossy covering.

The mountain range which forms the coast region of Alaska and sweeps away to the westward through the peninsula and the Aleutian islands, is apparently a continuation of the Rockies which form the backbone of the continent, and the chain of islands seems like the caudal appendage of some huge vertebrate animal. These islands seem to be largely of volcanic origin.

One authority has enumerated sixty-one volcanoes that have been active since the occupation of the country by the Russians, mostly on the Alaska peninsula and the Aleutian isles. It may be questioned whether this is not an overestimate of the number, but there are very many extinct volcanoes in the Territory which exhibit indubitable evidences of their former character. Of those now active or in operation within two decades, so far as can be definitely stated, there are not more than a dozen. The following are positively known, and five of them have been seen in a high state of activity by the writer within a few months.

Bogoslof, 100 miles directly west of Unalaska, about 600 feet in height, emits smoke and steam with great force from innumerable fissures in the surface of broken rock and friable matter, the whole of this part of the island having come up out of the sea within a few years past. This mountain has been fully described in official reports.

Makushin, on Unalaska Island, snow covered, slowly but steadily pouring out its immense volumes of steam and white smoke, is visible in a clear day for 50 miles at sea.

Akutan, on Akutan Island, between Unimak and Akutan passes, violently puffing out its black and white smoke from a wide open mouth on its summit, at intervals of a few seconds, is the observed of all observers.

Sheshaldin, on Unimak Island, a beautiful cone of the most perfect proportions, rising to a height of 8,755 feet from the sea, which laves and dashes in spray and foam upon its base, clad in robes of fleecy snow at the time of the writer's observation on the 28th of April last, but disclosing its broad and blackened pathway of ashes and condensed smoke and steam from the huge orifice near the sharp-pointed apex to the base, is still gently smoking as if a raging fire were now just dying down for want of fuel.

Pavlof, near Belkofsky on the Alaska peninsula, which can be approached to the very base of the mountain at Bear and Pavlof Bays, apparently something more than 4,000 feet in height, puffs out its immense volumes of dense black smoke from an opening on one side, perhaps 500 or 1,000 feet from the sharp-pointed summit, at intervals of half a minute, and the visible demonstration of its work in the form of a blackened mountain side to the water's edge soon after a heavy all of snow proved the power of its invisible engineering.

Illiamna, near the left-hand shore of Cook Inlet, as the navigator passes in, is 12,066 feet high, and is reported to be constantly active, sending out ashes and sulphurous smoke.

Redoubt, about 60 miles northeast of Illiamna, is also constantly active, but has never been explored and perhaps only seen from a distance.

Mount St. Augustine, some 150 miles north of Kadiak Island, was active for some months in 1883, but no activity has been reported since the year following. While the eruptions were in progress the decks of vessels were covered with ashes from it for hundreds of miles at sea.

Chirikof, on an island of the same name, was reported active about 10 years ago.

Kagamil. In 1874, when Captain Lennan, now of the steamer *Elsie*, was sent to the islands of the Four Mountains, a small group west of Umnak, to explore a cave said to contain mummies, and from which he succeeded in bringing 17 bodies, most of which have been preserved in different museums in the country, he discovered on Kagamil Island a low mountain near the water's edge, from the base of which in many places there issued jets of sulphurous steam, smoke, and noxious gases which compelled them to stand off from the shore to avoid the offensive odors. No other account of this eruption has been received. These islands are now seldom, if ever, visited.

Progromnia, a mountain near the west end of Unimak Island, 5,832 feet high, is reported upon the charts and in the early records as a volcano, but careful inquiry has failed to elicit definite information of an eruption in recent times.

Thermal and mineral springs are frequent. The large sulphur "Iodine" springs, about 12 miles from Sitka, are very much visited for their remedial qualities in many diseases, and the Hoonah springs are only a little less frequented, on account of the greater inconvenience in reaching them. There are said to be hot marshes and a lake of sulphur on Unimak Island. There is a warm lake on the upper Tanannah, reported by Lieutenant Allen. There are also hot springs, some of them boiling, on the islands Unalaska, Atka, Akun, Kagamil, and Kanaga, at various places on the mainland.

CLIMATE.

The climate of the country is an important element in determining conditions found to exist, and should be taken into consideration in estimates of future development and progress. The broad extent of the Territory, the snow-capped mountains and glaciers, the extensive sea-coast, the warm ocean currents, the broad moorland plains of the north-land, and various other peculiar features and conditions necessarily contribute to the wide diversity of climate and atmospheric phenomena which we find to exist. The interior of the Territory, far enough from the coast to be uninfluenced by the sea breezes and ocean currents, exhibits extremes of heat and cold, with long winters and short summers, and has a dry atmosphere through all the seasons; while the climate

of the long coast line, from Dixon Entrance to the extreme west end of the Alaskan Peninsula, and of all the islands of southeastern Alaska, of the Kadiak and Shumagin groups and the Aleutian Archipelago is mild and equable and moist. The severity of the climate is greater in the higher latitudes, and north of the Arctic Circle few trees are found, and those are of a stunted growth. In the Yukon Valley the thermometer frequently registers 100° above zero in summer and from 50° to 70° below in winter. From the Yukon to the ocean on the north there are apparently no alleviating climatic conditions. The earth below the tundra moss remains frozen the year round. Portions of the land lying more favorably for drainage produce grasses, small bushes, most beautiful flowers, and an abundance of berries. Snow does not accumulate to a great depth in this region, and there is a very small amount of rainfall in summer.

The more southern portions of the Territory, and especially those affected by oceanic influences, are better known and observations have been taken systematically and in some cases reported officially. From these reports it appears that the variations of heat and cold and wet and dry weather between different places along the coast and among the islands are not so great as to require separate discussions. The thermometer has ranged between 90° above and 4° below zero during the 48 years of the official record at Sitka, with a mean annual temperature from 41° 3' to 46° 8'. The number of days in which rain or snow fell during the years of this record has averaged up to nearly 200, though some of these days were practically fair and fine. The official weather and meteorological record for the past year at Sitka, kindly furnished me at my request by Lieut. Commander O.W. Farenholt, which is attached as Appendix A, need not be greatly amended to describe meteorological conditions throughout the whole of southeastern Alaska, the coast of the North Pacific, and the island country to the westward.

This peculiarly warm and equable climate in the coast regions is due, as has been heretofore stated, to the Kuro-Siwo, or Japanese Current of warm water, which, flowing across the Pacific Ocean from the tropical regions of the Eastern Hemisphere, strikes the American coast near the southern boundary of Alaska and is deflected in part northward, following the coast in its sweeping bend westward and southward again.

CIVIL GOVERNMENT OF ALASKA.

After a period of nearly 17 years of purely military and naval rule, in 1884 the act organizing the Russian purchase known as Alaska was passed by Congress and approved by the President of the United States. The Territorial organization was incomplete and has not since been completed to give the Territory representation in Congress, local legislative powers, or even certainty of position among the Territories of the United States. During the year covered by this report the civil government has been administered by the following officers, viz:

Governor, Lyman E. Knapp; judge of the United States district court, John S. Bugbee; marshal, Orville T. Porter; clerk of court, Nicholas R. Peckinpugh, since August 16, 1890; United States district attorney, Charles S. Johnson; collector of customs, Max Pracht, succeeded by Edwin T. Hatch July 1, 1891; United States commissioners: Sitka, T. Carlos Jewett, until October 2, 1890, since which time Robert C. Rogers; Juneau, Louis L. Williams, to August 9, 1890, since which time William R. Hoyt; Fort Wrangel, James Sheakley; Unalaska Island, Louis H. Tarpley.

All these officers were appointees of the President, by and with the consent of the Senate, and they have been assisted by eight deputy marshals, five deputy collectors of customs, clerks, justices of the peace, notaries public, constables, and native policemen. There has been no friction in the workings of the government machinery, and the hearty coöperation and assistance of all my associates are gratefully acknowledged. I take pleasure also in acknowledging courtesies and assistance from the U. S. S. *Pinta*, Lieut. Commander O. W. Farenholt commanding, and the U. S. revenue cutter *Bear*, Capt. M. A. Healey, commanding.

In addition to my work at my office in Sitka I have made official visits on the U. S. revenue cutter *Bear* to the Shumagin group, Unalaska Island, and the Pribilof islands in the Bering Sea; to Chilkat on the U. S. S. *Pinta*; to Juneau, by the courtesy of Rudolph Newmann, general agent of the Alaska Commercial Company, on their steamer *Dora*; and to various places in southeastern Alaska on the regular line of mail steamers. During these visits careful investigations were made into the condition of the natives, all matters affecting the efficiency of the public schools, the administration of justice, the condition of public buildings, the general progress of the people in the development of the country, and the success of business enterprises of every kind. In all parts of the Territory, so far as information has reached this office, all is peaceful and quiet, and no outbreak of lawlessness, other than exceptional instances of crime and misdemeanor, has occurred.

INDIAN POLICE.

Under the direction of the Commissioner of Indian Affairs I have within the year organized a corps of paid Indian police consisting of 1 native officer and 14 privates, all of whom have been provided with badges and insignia of their office. Provision was made by the department for 4 officers and 50 privates, but up to this time it has been impossible to find men in many of the native villages of whose efficiency and trustworthiness there was sufficient certainty to warrant the issue of commissions. It seemed better to proceed in a conservative manner and only as rapidly as could be done with reasonable certainty. Experience has proved that the best results are obtained by placing the native policemen under the direction of some white man in his vicinity, and when possible a deputy marshal has been named as his chief of police. The native policemen have been instructed to preserve the peace and prevent drunkenness and hoochinoo making among the natives, to inform the marshal of all infringements of law, to secure as far as possible the attendance of native children at the public schools, and generally to aid the marshal or other person to whom they are required to report in the preservation of order, serving processes, and obtaining information as to matters important for the Government to know as to the condition of affairs among the natives. Since the organization of the police corps last November their services have proved very valuable and it is desirable that the whole force authorized be employed so soon as the right men can be found with conditions favorable for successful results. As a specific instance of the value of the services of these policemen during the fall of 1890 it is said that a firm closing up business at Juneau took a quantity of black molasses to Chilkat, and sold some 8 or more barrels at tempting prices to the Indians, and that they obtained it also from other sources. From this material the Indians distilled a vile liquor called "hoochinoo" in large

quantities and during the early part of the winter drunkenness and bacchanalian rows, and even bloodshed, were frightfully common. About the 1st of February last 3 native policemen and 1 white man as an officer were appointed for Chilkat, Chilcoot, Pyramid Harbor, and the upper Chilkat villages, with orders to report to Deputy Marshal Healy. In a few weeks the entire region was substantially cleared of hoochinee stills and the native liquor. About twenty stills were broken up and more than a hundred gallons of the liquor destroyed and quiet again restored.

MILITIA.

By the act of Congress, February 12, 1887, for the purposes of providing arms, ordnance stores, quartermaster stores, and camp equipage for issue to the militia, provision was made for the supply of the militia of Alaska, and efforts were made by my predecessor to effect an organization, but without success. For the purpose of better caring for stores obtained on his requisition, and preparatory to the organization of the militia of the Territory, I appointed a personal staff of 8 officers, including an adjutant-general, a quartermaster-general and assistant, a surgeon, an inspector-general and 3 aides. On the 5th day of June, 1891, Company A, First Regiment Infantry, Alaska Militia, was organized, with Harry Hare, captain; Fred Heyde and Jo. Snow, lieutenants. The company has 48 men besides the 3 officers. Good reports of this company have since been received. It has been suggested that application may soon be made for the organization of a company of natives, and if so the embarrassing question will arise as to their legal status, upon which subject more will be said hereafter. Further legislation ought to be had allowing the use of a portion of the appropriation for equipment to be used, in the case of the Alaska quota, to pay for services and expenses of the men in an annual encampment and drill, and on occasions, if any such shall occur, when the exigencies of the service require that they be called out for active duty. Thorough efficiency and readiness of response to such calls can only be secured by fair compensation, and no compensation can be provided for except by national legislation.

THE SEAL ISLANDS.

Section 5 of the act of May 17, 1884, requires the governor from time to time to inquire into the operations of the Alaska Seal and Fur Company, and annually report to Congress the result of such inquiries and any and all violations by said company of the agreement existing between the United States and said company.

In the discharge of the duties imposed upon me by this act I used my best endeavors while visiting the seal islands in April last to obtain such information as would give me an intelligent idea of the situation, though my limitations of time and opportunity were such that it is doubtful whether anything of value will be added to the sum of information upon the topics discussed. These islands, also known as the Pribilof Islands, are located in Bering Sea a little more than 200 miles northwest of Unalaska, and consist of St. Paul, St. George, Otter, and Walrus Islands. St. Paul is 13 miles long by 4 in width, and St. George, 30 miles southeast, is about 10 miles long by 4 in width. The other islands are very small and unimportant. All these islands are treeless and somewhat rocky and without harbors. They are evidently of volcanic origin, and a large portion of the time are enveloped in mist and fog. The inhabitants are Aleuts, taken there as employés

of the company holding a lease of the islands, and a few white people connected with the company and the Government agent. The North American Commercial Company is the present lessee of the islands. During those parts of the year in which they are not employed for the company the natives are engaged in hunting and fishing or idling away their time in occupations less commendable.

The census and vital statistics for 1890 show on St. George Island 19 native houses and 22 families. The whole native population is 92, of which 42 are males and 50 are females; 51 are adults over the age of 15 years, 23 are between 5 and 15, and 18 are under 5. In 1890 there were 7 deaths and 6 births. On St. Paul Island the number of native families is 66; native population 219, of which 126 are adults over the age of 17 years, 64 from 5 to 17, and 29 under 5. In 1890 there were 21 deaths and 15 births.

The highest point registered by the thermometer in 1890 was 55° and the lowest was zero.

The Government agents, Capt. A. W. Lavender, on St. George, and Colonel Murray on St. Paul Island, took every pains to furnish information upon the subjects of my inquiry, and the company's agents, Mr. C. L. Fowler and Mr. J. C. Redpath, were no less kind and courteous.

The number of seals taken by the North American Commercial Company in 1890 was only 21,596, a much smaller number than had been taken in any year during the continuance of the Alaska Commercial Company's lease. The following table shows the number killed in each year:

Year.	On St. George.	On St. Paul.	Total.	Year.	On St. George.	On St. Paul.	Total.
1871.....	19,077	29,788	48,865	1882.....	20,000	80,000	100,000
1872.....	25,000	65,499	90,499	1883.....	15,000	60,101	75,101
1873.....	25,000	68,035	93,035	1884.....	15,000	83,092	98,092
1874.....	10,000	88,058	98,058	1885.....	15,000	70,451	85,451
1875.....	10,000	82,890	92,890	1886.....	15,000	72,120	87,120
1876.....	10,000	69,367	79,367	1887.....	15,000	77,389	92,389
1877.....	15,000	58,732	73,732	1888.....	15,000	73,808	88,808
1878.....	18,000	78,570	96,570	1889.....	15,000	68,485	83,485
1879.....	20,000	80,572	100,572	1890.....	4,763	16,833	21,596
1880.....	20,000	80,000	100,000				
1881.....	20,000	80,000	100,000	Total.....			1,706,630

During this period there were also killed a considerable number for food by the natives, many of them pups, but not probably in excess of the number allowed by the Government for that purpose.

The marked falling off in the number of seals killed in 1890 may be accounted for in three ways: First, Diminution in the number of seals visiting the islands, either by reason of unwarranted depredations upon seal life and indiscriminate slaughter of females in the open sea, or by some unexplained freak of the seals in not returning to their accustomed rookeries. Second, Because while the seals were later than usual in reaching the islands in the season of 1890, the killing was stopped on the 20th day of July, instead of August 1, as has been the rule. Third, From the fact that during the last year or two of the Alaska Commercial Company's lease the difficulty of procuring the number allowed them had induced the killing of those younger than had heretofore been taken.

During the fall of 1890 poaching vessels succeeded in landing several boats at one of the rookeries, and some 190 seals, mostly females, were clubbed and killed. The poachers were driven off without their booty, and most of the skins were saved.

The school on St. George Island, George B. Fox, teacher, reports 71 school days with an average daily attendance of 20.154. Slate and blackboard exercises showed efficiency of drill in writing and figures. The school on St. Paul was taught by Edward T. Baldwin, with an average attendance of 43 scholars between the ages of 6 and 16 years. The school was in session 4 months. The grade of acquirements by the scholars of both schools was low, but the fidelity and efficiency of the teachers in their work was undoubted.

Some years ago these islands were stocked by the Alaska Commercial Company with white and blue foxes, and the natives have been allowed to hunt them. The allowance for skins delivered at the company's store was formerly 50 cents, but is now \$1. It is estimated that no less than 9,000 foxes have been taken on St. George Island during the last 20 years. The cash earnings of the natives on St. George Island may be proximately stated as amounting in 20 years to \$198,547.70, made up as follows:

Seal-killing contract.....	\$152,063.20
Other labor for company.....	24,000.00
Skins of food seals.....	13,484.50
Fox skins.....	5,000.00
Other sales.....	4,000.00

The resident population of St. Paul Island has had equally good opportunities, and the cash income has been increased by abundance of food supplies from the seal and sea-lion carcasses, birds, and fishes taken at times when the inhabitants are not employed for the company.

The natives do not quite comprehend and appreciate the importance of laying by their surplus funds in store for future use, and yet they are not wholly improvident.

They have credits with the company, although just now somewhat diminished by their smaller earnings when fewer seals were taken, with figures, on the 1st day of January last, as follows:

Total to the credit of natives August 11, 1890.....	\$4,128.43
Reduced by drafts on deposit.....	1,669.46
Leaving on deposit January 1, 1891.....	2,458.97
Add to this, deposit of the priest.....	1,600.00
And of the Russian Church.....	1,294.55
Whole deposit January 1.....	5,353.52

The company, so far as could be learned during my brief visit, is endeavoring to treat the people fairly, if not generously, charging only reasonable prices for goods and seeking to promote their physical, moral, and intellectual welfare. They have a physician on both islands, and health and cleanliness are especially cared for.

The most serious difficulty to be treated seems to be the illegitimate and indiscriminate slaughter of seals, females and the young, as well as the bulls of proper age, in the open sea, a matter which is under the direct attention of the Government. There is no doubt that a most valuable industry and fruitful source of national income is in danger. More than 100 marauding vessels have been hovering about the islands in Bering Sea during the season, and large numbers of skins have been taken. The C. P. N. Co.'s steamer *Danube* made a special trip to the North Pacific during the latter part of June, reaching Victoria on return July 6 last, having on board nearly 18,000 seal skins received from some 35 sealing vessels which it met, apparently by appointment. Those delivering their cargoes to the *Danube* were all British vessels. This partial enumeration for a small portion of the season confirms the

opinion that the estimate of the number of seals taken illegitimately and irregularly during 1890, which is fixed at from 50,000 to 60,000, is not too large. (See Appendix D.) If, as is generally supposed, those captured in the sea represent only a small percentage of the seals actually killed, especially since the slaughter must of necessity be indiscriminate, the destruction to seal life is very great.

Since the agreement between the United States and Great Britain, of date June 15, 1891, was published, the waters of Bering Sea have been patrolled by 8 or more armed vessels, American and British, acting in concert to stop the depredations. At this writing two American schooners have been seized and brought to Sitka and duly libeled for forfeiture in the United States district court, and 1 British vessel has been sent to Victoria for proceedings in the English court. Of the results of previous seizures, it may be stated that during the year 2,468 seal skins which had been seized and declared forfeited by the court were sold at public auction in San Francisco, from which were realized \$24,256.37. The market value of seal skins has greatly increased since the excitement over the Bering Sea matter has been so great, owing largely, probably, to the smallness of the catch at the islands last year, and the increase in rates by the terms of the new lease of the islands.

EDUCATION.

The change in the system of management of the public schools in Alaska, by transferring the whole business from the Territory to the national capital, prevents access to the records and all possibility of a full statistical report. A general agent was appointed for the Territory as usual and a desk assigned him in the Bureau of Education at Washington, where he remained from the time of his return from a cruise in the Arctic last year until he came back to Alaska for another cruise in the Arctic in 1891, stopping only at convenient places during his passage. His return from the north is not expected until late in the fall, when it is supposed he will go east again. An assistant general agent was selected from among the clerks in the office of the Commissioner of Education, permanently located in Washington, who, it may be presumed, receives reports direct. But the information given does not become available to this office until too late for use, if indeed it is received at all.

Thirteen Government day schools have been in operation during the year, as follows, viz:

Location.	Teacher.	School.
Unalaska.....	John A. Tuck.....	Native.
Afognak.....	John Duff.....	Do.
Kadiak.....	W. E. Roscoe.....	Do.
Juneau No. 1.....	Miss Rhoda Lee.....	White.
Juneau No. 2.....	Mrs. Tozer.....	Native.
Douglas No. 1.....	Mrs. W. S. Adams.....	White.
Douglas No. 2.....	C. H. Edwards.....	Native.
Killisnoo.....	E. M. Calvin.....	Do.
Sitka No. 1.....	Miss Cassia Patton.....	White.
Sitka No. 2.....	Mrs. Vanderbilt.....	Native.
Wrangel.....	Mrs. W. G. Thomas.....	Do.
Klawak.....	Henry G. Wilson.....	Do.
Howkan.....	Mrs. Clara (Gould) McLeod.....	Do.

Ten of these schools are within the section known as southeastern Alaska. Schools were also authorized at Chilkat, Kake village, Unga,

and perhaps at Belkofsky. At Kake the school house built during the year was not completed in time to secure a teacher for the school. A new house has also been erected at Chilkat to change the location of the school from the Haines mission to a more favorable one near the canneries. Complaints from residents of Chilkat, Unga, and Belkofsky that they have not received proper attention in the matter of schools, were referred to the general agent. Personal visits to nearly all of these schools have satisfied me that the teachers employed have performed their work conscientiously and well. In some places the Indian police system introduced last fall has been very helpful to the attendance. The want of a compulsory attendance law has not, however, ceased to be felt. For the amount of wages paid to teachers, statistics of attendance, and the general character of contracts with religious and mission schools during the year, reference is made to the Commissioner of Education. The general agent of education kindly furnished the information that, for the school year 1891-'92, Government day schools have been provided for, 1 each, at Karluk, Kadiak, Afognak, Chilkat, Killisnoo, Wrangel, Klawak, Howkan, Nutchek, Metlakahtla, and Kake, and 2 each at Juneau, Douglas, and Sitka, 17 in all, an increase of 4 above the number in operation during 1890-'91, and that contracts have also been made with missions as follows, viz: Presbyterian at Point Barrow, Hoonah, and Sitka; Episcopalian, at Point Hope and Anvik; Congregational at Cape Prince of Wales; Reformed Episcopal at St. Lawrence Island; Roman Catholic at Nulato, Kofokurefsky, and Cape Vancouver; Swedish evangelical at Unalaklik and Yakutat; Methodist at Unalaska and Unga. There were several mission schools receiving Government aid last year, not given in this report, of those to be assisted for the next year. Why they were omitted in the contracts for the future is not stated. The North American Commercial Company employed teachers, one each, at St. Paul and St. George Islands, during 4 months last winter, presumably in fulfillment of their contract with the Government; for particulars, see discussion of the topic.—The Seal Islands.

It is safe to assert that the best work for the education and elevation of the natives of Alaska has, thus far, been done by the missions and churches. This statement is made in large measure from personal observation. Some of these schools have given me specific information in the form of written reports and in other cases verbal statements have been made. The two distinctively industrial schools are the Metlakahtla colony and the Sitka Industrial Training School. At the former place Mr. Duncan and his associates have organized the whole community, some 990 persons, into a training school with special features, the young only receiving book instruction, but all engaged in the various vocations of life and business under special tuition and care. They have a cannery in operation, a lumber mill, a store, transportation boats on a small scale, mechanics' tools, and the various appliances of civilized life. They are taught to keep the store, practical book keeping, to run the mill, to perform all the processes of preparing salmon for the market, to build houses, to cultivate their land, to organize and run their municipality, to manage the school and church meetings, and even to make speeches of welcome to officials and distinguished visitors.

These people dwell in frame houses, dress and appear like white people, have no chiefs, but elect a town council who have a general oversight of the settlement. The children are bright and are making considerable progress in education. During the next year their school is to rank as a government day school.

Prof. W. A. Kelly, who has had charge of the Sitka Industrial Train-

ing School, reports 20 teachers and assistants, and 140 pupils as an average attendance during the year. The school has made steady progress. Mr. Kelly's observation extends over a period of about 6 years, during which time he has been in charge, and his statement carries weight when he says:

The transformation of most pupils who have been in the school from 3 to 5 years is very gratifying. The girls, under vigilant training, become efficient in household work while the boys become skilled in manual trades. The training school is working a wonderful transformation. A retrospect of 6 years' work shows a surprising revelation and the beginning of a wonderful revolution—a revelation of their heathen customs, of their depths of degradation, their woful ignorance, their sensuality and great mortality—the harbinger of a revolution in their beliefs, customs, and manners of life.

Besides the schools in connection with the missions referred to there are also schools connected with Catholic, Episcopal, Moravian, and other denominational missions, and 17 parish schools of the orthodox Russian Church, of the condition of which it is impossible at this writing to secure very full information. The Sitka Russian Parish School has had about 30 pupils, and very satisfactory results have been observed.

A year's trial of the experiment in the management at present in force has confirmed the opinion heretofore expressed that the educational interests of Alaska demand a management of its schools at closer range than 4,000 miles of distance, with facilities of communication so poor that responses to inquiries and suggestions of needs can be obtained from headquarters only after an interval of from 6 weeks to 6 months. An advisory committee was appointed, but they have had no authority and very uncertain duties. We have had local committees in a few places, but they are without power even in the greatest emergencies, and there is no proper material for committees suitable to be intrusted with power, except in a very few towns.

It is a problem of unusual perplexity which is here presented for solution, and different persons might easily differ as to methods. A few essentials may perhaps be agreed upon. First, the management should be as nearly as possible local; second, it should be non-partisan and non-sectarian; third, those having charge should be competent and have some adaptation to educational work. Perhaps a Territorial board of public instruction, to be appointed by the Secretary of the Interior, who, under the direction of the Commissioner of Education, should have full control of all the Government schools and the expenditure of the public moneys, to whom the general agent, all superintendents, local committees, and teachers should report, and under whose immediate direction they should act, would meet the requirements of the situation. If not, some other plan embodying the above essentials ought to be devised. The requirements of other localities where different conditions exist constitute no guide for action in the case of Alaska, which is *sui generis*, and the questions to be decided should be approached with a full consideration and appreciation of the remoteness of the Territory, its isolation, the multifarious character of its people, and the fact that not less than a dozen religious societies are pressing for their share of Government funds to be distributed to contract schools.

THE ADMINISTRATION OF JUSTICE.

The courts of Alaska consist of the United States district court, and four commissioners' courts, located at Sitka, Juneau, Wrangel, and Unalaska. The district court is, by the organic act, required to hold

two terms in each year, one at Sitka beginning on the first Monday in May, and the other at Wrangel beginning on the first Monday in November, with special terms in the discretion of the judge. The business coming before this court, as a matter of fact, requires it to be kept open from one term to another, and recesses are taken from time to time as a relaxation of business allows. The regular terms have been held only at Sitka and Juneau, though it now seems that there ought to be a special term at Unalaska every year. The jail located at Sitka is insufficient for the requirements of the Territory, and the little lockups at Juneau and Wrangel can be used while prisoners are in transit only.

MINES AND MINERALS.

While it was not the mines and minerals of Alaska that first called attention to the remarkable features and characteristics of this country, the discovery of gold has had great influence in its progress and development. Our mineral resources are the subject of more discussion and still create a greater fever of excitement than any other. Furs first attracted the emigrant, and the fur business may still be considered its leading industry. The fishing interests come second, and raise the question by their magnitude and importance whether they should not be held first in estimation. After furs and fisheries statistics give mining the chief place in Alaska's industries, and the confident expectation in the minds of many people that mining interests will soon lead all others is certainly supported by numerous and suggestive indications of great wealth. Many discoveries of rich ore and placer deposits have been made within the year, and locations by scores have been recorded in the local recording districts. Eleven applications for patents of mining claims have been filed in the land office and assessment work has been done on hundreds of prospectors' claims. Placer mining has shown no abatement, and in 1890 the Yukon placers are said to have yielded a third more gold than in any other previous year. Hydraulic mining on a more extensive scale than formerly promises better results. The tunnel of the Silver Bow Basin Mining Company at Juneau has been completed and the washing of the rich deposit has been in operation for some months. The success of the enterprise is apparent, but the results in statistics do not belong in this report. At Latuya Bay the cleanup for the last season was so satisfactory that a much larger force has been carrying on the work the present season. The managers are reticent as to the exact results. At Shuck are three principal basins filled with deposits of gravel, which appears to be rich in mineral. It is owned by the Shuck Bay Placer Mining Company. The lower basin has been tapped by a tunnel 700 feet in length, and the work of washing has begun. No cleanup had been made at last advices. Work has also been commenced upon the upper basins. The company is confident. The work at Sundum has been carried on for some years in a desultory way with a degree of success which warrants belief in the value of the mines. Tunnels have been commenced at Salmon Creek, near Juneau, and at Sheep Creek only a little farther away, and ore of excellent quality taken out. A mill with ten stamps has been built at the latter place within the year. The Archie Campbell Mill was kept in operation during a large portion of the year. The Treadwell Mill and Mining Company have continued work to their full capacity, with results as satisfactory as ever. The 80-stamp mill of the defunct Bear's Nest Company has been divided up and removed

to other places, where it will be of service. The Fuhter Bay Mine on Admiralty Island has continued its usual activity. Operations at Berner's Bay have been somewhat limited. More activity has been manifested in the Silver Bay district, near Sitka, several mines neglected for some time having been worked again. The work has, however, been on a limited scale, and it is too early to discuss results.

A comparatively new mining enterprise is the Apollo Consolidated Mining Company T. C. Mayou manager, at Unga. On the 1st of May last their tunnel had reached the extent of 900 feet, a 5-stamp mill had been erected and used sufficiently to test the ore. The mill has 5 stamps, 4 amalgamators, 1 grinding pan, 1 improved Frue concentrator, a 50 horse-power engine, and buildings enough to greatly increase its working capacity by more machinery. The tunnel work thus far has been mainly preparatory and to discover the value of the mine. The assayer gives the highest encouragement and the company have a right to expect a return of their investment at an early day. Fifteen mills for crushing ore and having the conveniences for securing the free gold and obtaining the sulphurets in a compact form for shipment represent the sum of this form of equipment in Alaska. Several mills have also amalgamators and chlorination works. Fourteen mills were reported last year, two have been since erected, and one (the Bear's Nest) dismantled. The number of stamps in the aggregate has increased from 525 to 540. Several of the small mills have not been in operation during the year.

The production of gold and silver in Alaska has been both overestimated and underestimated. Those who assume that the whole output is shipped to the mint direct and consequently reported, place the amount at \$800,000, which, certainly, is much too small an estimate. The estimate used in this report, \$1,000,000, is probably less than the amount actually produced. Successful business of all kinds is more likely to seek concealment than publicity, as to exact results, and the opportunities of individual placer miners and small firms to quietly pocket their earnings, or to dispose of them without ostentation, are ample.

Of other minerals coal alone has been mined, and that to such a limited extent that coal mining can scarcely be called a business in Alaska. A number of deposits have received attention. At Port Muller, in Herendeen Bay, the Alaska Commercial Company took out 500 tons of soft coal during the summer and it was used at Unalaska, Belkofsky, Unga, and other stations of the company. An inspection of it in the warehouse revealed a fine-looking article, and reports indicate a free-burning lignite. It is consumed rather too quickly for steaming purpose. This mine is located quite near the Bering Sea side of the peninsula and 13 miles from Portage Bay, to which it is proposed to build a railroad and deliver the coal from the southern port. An old mine on the north shore of Unga Island has been worked to a small extent to supply a local demand. The quality of the surface croppings, which alone have been reached, is not entirely satisfactory. The Cape Lisburne coal deposit is utilized by ships in the Arctic in want of fuel, but is not of first-class quality so far as found at this date. A more extensive venture has been made at Kachemak Bay, on the eastern shore of Cooks Inlet, where are extensive coal deposits lying conveniently for mining operations. The quality of this coal does not seem materially different from that found elsewhere in the Territory. Some 3,200 acres of these lands have been claimed and the claimants are maintaining their occupation and making a show of work upon

them. The tests of the quality are said to prove that in the near future, when conditions are right for it, an extensive business will grow up here. Several other deposits of coal on Cooks Inlet furnish samples of similar quality to those in Kachemak Bay. Coal deposits at Yakutat, Killisnoo, and Admiralty Island have been prospected and good samples found, but no steps have been taken for systematic development. Copper, cinnabar, iron, marble, and granite abound, and Jade Mountain, a little northward of Kowak River, is alleged to furnish immense quantities of fine nephrite, but no survey has been made with a view to determining the value of minerals in the Territory, and information as to all of them, except those mined or quarried, is indefinite and unreliable.

FORESTS AND THE PRODUCTION OF LUMBER.

The forests of Alaska form one of the prominent features of the country. Along the coast and on the islands from its southeastern boundary to Kadiak Island and the peninsula opposite is one almost continuous forest, except where the elevations of the mountain ranges prevent the growth of trees, as is the case with all mountains rising to a height of more than 1,500 feet. The interior slope of the coast range is also wooded. The vast region of the interior northward is partially covered with forest growths except the low country bordering on the Bering Sea and the Arctic Ocean. The Yukon River and its southeastern branches are fringed with dense forests, while to the northward trees become scarce and stunted as approach is made to the northern ocean. In the eastern part there are considerable growths of wood as far north as the range of mountains 50 or 100 miles from the coast.

The western part of the peninsula and the Aleutian Islands have no trees. Alder bushes fringing the streams constitute the wood supply except what comes in the form of driftwood or is transported. The timber of the southeastern portion of the territory consists of spruce, hemlock, yellow and red cedar. It is erroneous to state that the spruce is of little value. While many enthusiasts have overrated the quality and quantity of this timber, it is certainly no unimportant item. All the valleys are filled with trees of immense size and great height. Trunks from 4 to 6 feet in diameter, straight and limbless to the height of 40 feet, are common. Trees seen from the decks of steamers along shore are usually of smaller size and limbed to the ground. The spruce makes fine lumber. Hemlock is also quite abundant, and affords excellent lumber for outdoor uses, linings, and studding. Yellow cedar is the most valuable timber and the lumber manufactured from it is much sought. It does not occur in inexhaustible quantities, but in the aggregate there is a large amount. It is found upon all the islands of the Alexander Archipelago and not much elsewhere. The red cedar tree is more frequently met with than the yellow cedar in some portions of the southern islands, but is not so valuable. The forests of the interior are spruce, hemlock, birch, poplar, and other deciduous trees. There are thirteen mills for the manufacture of lumber in the territory, twelve of which are in the southeastern portion. The lumber business has been harassed by the unfortunate conditions of land titles and most of the lumber used has been imported from the States. Those who have endeavored to supply the demand for it from the Territory are now involved in suits for timber depredations. The depredations reported in 1890 by Timber Agent Gee, including all previous acts by these parties, are as follows:

	Amount.	Value.
Sitka Milling Co., Sitka	213, 600	\$4, 252
Presbyterian Mission, Sitka	35	.....
Theodore Haltern, Sitka	1, 700	68
Lake Mountain Mining Company, Sitka	150, 000	1, 820
Alaska M. & M. Co., Douglas	5, 014, 000	184, 000
Eastern M. & M. Co., Douglas	300, 000	7, 500
Alaska F. O. & G. Co., Killisnoo	2, 200	6, 050
S. B. B. Mining Co., Juneau	80, 000	480
Wilson & Sylvester, Wrangel	1, 000, 000	7, 300
Alaska T. & L. Co., Shakan	3, 000	.....
N. P. H. P. Co., Klawak	800, 000	14, 800
Edward Cobb, Shakan	218, 000	3, 270
Wm. Duncan, Metlakatla	25, 000	750
Wm. Duncan, Metlakatla	3, 000, 000	20, 000
Total		250, 340

LABOR SUPPLY.

The laborers of Alaska may be divided into three classes: White men, who receive large wages as skilled workmen; Chinamen, who usually work at specialties and in the canneries on contract; and natives, who form much the larger class, and are employed in various ways. The white laborers are quite generally employed as mechanics and artisans, foremen, and leaders of gangs. They are also employed when great responsibilities are thought to be resting upon the workmen, and if special trustworthiness is required. These responsible places are given to natives only after they have won special confidence, and then only rarely. Chinamen are cooks, waiters, and specialty workers in canneries. Most of the work of making, filling, and preparing cans for the market in the salmon-packing establishments is done by them. The natives do much of the fishing for the canneries and salteries, serve as boatmen, do all kinds of packing, work in the mines as common laborers, are wood choppers, and do any other work coming to them. White laborers command from \$3 to \$5 per day, natives from \$1.50 to \$3. Much of the fishing by natives is done by the piece. Some 2,500 Chinamen were employed by the canneries last year. The labor supply has been equal to the demand, and is likely to be so while there is so large a laboring class as the native population of this Territory to draw from. They are, however, quite independent, and if prices do not suit they are able to live in their old ways upon fish, seaweed, and blubber.

Very little friction has occurred between employers and their employés. At Chilkat, where three canneries are located, the natives became dissatisfied with the prices paid for fish, and combining this grievance with an imagined infringement of their rights in the occupation of certain fishing grounds, they threatened to destroy the fishing nets of the cannery companies. Their attitude became so menacing that serious trouble was feared. Both the natives and the superintendents finally expressed a wish that the governor would come and see if the difficulties could be dispelled. Accordingly the U. S. S. *Pinta*, Captain Farenholt commanding, having the governor, the United States district attorney, and the captain of marines and a few of his men on board, steamed up Lynn Canal, and quietly dropped anchor at Pyramid Harbor. The natives for 25 miles around were called together, and a 2 days' conference closed with handshaking and a dispersion to their homes. The natives were a little sullen and declined to sell any fish at

the prices offered, but all has since been quiet, and violence is not feared. The *Pinta* made a second trip to the scene of trouble 2 months later, and reported no apparent danger.

POPULATION.

The census of Alaska is not yet completed, and consequently its enumeration of the people is not available for our study of this subject. The advance bulletin of population indicates a slight falling off in the number of our native tribes. The enumeration was incomplete and some of the figures published ought to be revised. The number of people accredited as belonging to the Tsimpseans and Hydah tribes is manifestly erroneous, and in the case of the former it is admitted by the special agent. The error grew out of the absence of a very large number of people at the time of the enumeration. It may be stated generally that however faithful and thorough an enumerator may be, no complete and accurate record of Alaskan natives can be secured in summer time, when the villages are so largely deserted for the hunting and fishing grounds.

The white population of southeastern Alaska is considerably larger than 10 years ago, but it is still small, only about 1,900 persons. There are also some 327 Chinamen, 2 Japanese, and 4 colored persons, making a total, with the 5,834 natives, of 8,038. There is a very large falling off in the number of Aleuts, from 2,451 in 1880 to 1,000 in 1890. This discrepancy is in part accounted for in the inaccuracy of the earlier census. We have very few figures from the Eskimos and interior Indians, but such as are given disclose a very great diminution, as we had reason to expect from the reports constantly reaching us of the great comparative death rate among these peoples. The total population of Alaska may be estimated at 33,000.

The white population of Alaska is nearly one-half foreign born, and very many have never been naturalized as citizens of the United States.

CONDITION OF THE NATIVES.

The change of conditions from year to year is not so marked as to call for special comment, but in the settled portions of the country, that is, along the coast and upon the islands, there is constant progress in civilization and improved conditions of life. The agencies at work for the uplifting of these peoples are effective and doing much good, while business enterprises, employing them as laborers and coming in contact with them in a business way, infuse them with civilized ideas. It is unfortunately true that bad ideas are also inculcated and immorality and vice go hand in hand with civilization to such an extent that many good people become disheartened and incline to surrender to the discouragements. But there should be no such impatience. Their progress out of darkness and degradation toward the light of a higher civilization compares most favorably with the darker ages of the early history of Germany and England. They are surely coming, and only patience and perseverance and the coöperation of good people everywhere, and especially the aiding hand of the Government extended as heretofore, but more liberally, in facilities for an enlightened government and their education in good things, will tell upon them in the near future more effectually than ever before.

As was stated more in detail in the last report, these people are in a

very sad physical condition. Disease and death that ought to be averted by medical skill are doing their terrible work among them as never before. Hospital treatment alone would be effectual for the eradication of their chronic and hereditary diseases, and the idea of a hospital is beyond their conception and its erection is beyond their financial ability. The Government certainly owes them this much of assistance. Otherwise they need none at present. They are self-supporting and will continue so if rightly treated and protected from the rapacity of unprincipled men.

As to their moral condition I see no reason for changing my opinion as expressed last year. Slow and gradual improvement must content us, for we are not likely to realize more. In the accessible portions of the Territory there is probably very little danger of further trouble in the matter of submission to properly constituted authority. The people are peaceable and kindly disposed, measurably honest, and have great respect for the Government. If spirituous liquors can be kept away from them lawlessness need not be feared and crime will be reduced to a minimum.

Suggestions as to the revision of laws pertaining to the administration of justice have been made elsewhere in this report and need not be repeated. A few matters not thus discussed may be briefly alluded to as follows:

Provision ought to be made for the incorporation of municipalities, providing for the holding of elections, defining qualifications for voting, and giving such powers as are usually exercised by such municipalities elsewhere.

It is one of the important and pressing calls that Government hospitals be established for the accommodation of natives afflicted with chronic and hereditary diseases, and provision should be made for keeping insane persons and paupers.

Better transportation facilities should be provided for the use of the civil government in the performance of official duty.

Attention should be given to the public buildings without delay. A careful inspection and estimates of expense should be made by some competent person from the office of the Supervising Architect at Washington.

Agricultural experiment stations ought to be established at different places within the Territory.

The coast surveys ought to be hastened. The report of 10 shipwrecks in the waters of the Territory within a year, made a second time, is certainly a very convincing argument.

The legal and political status of the native population ought to be defined by legislative enactment.

More commissioners and deputy marshals are very much needed, and justices of the peace ought to be authorized and provision made for their compensation. Jails or lockups and other conveniences for the performance of the duties of commissioners and justices of the peace should be furnished.

Very respectfully, your obedient servant,

LYMAN E. KNAPP,
Governor of Alaska.

HON. SECRETARY OF THE INTERIOR,
Washington, D. C.

REPORT OF SUPERINTENDENT OF YELLOWSTONE
NATIONAL PARK.

EXTENSION OF THE PARK.

On 30th March the President, under authority contained in the act for the repeal of the timber culture laws, set apart as a timber reservation a tract of land bordering the Park on the east and south.

Under date of 14th of April this reserve was placed under my charge, "to assume control thereof and do any and all things as to this accession as you do in the Park itself;" there was thus added a strip 25 miles wide to the eastern and one about 8 miles wide to the southern side of the Park.

It has long been a matter of conjecture that there is a good deal of mineral wealth on and near the head of the Stinking Water, eastward of the Park. Last year these conjectures bore fruit in inducing a rush of mining men to that section; this year a steady stream of them has poured into the region, with what success is not yet known. Those best acquainted with the locality say there is no doubt that a part, at least, of the new district is within the limits reserved by the President's proclamation.

I have not as yet been in the country referred to, but hope to go there soon. Nothing, however, can safely be done to protect the place until it is definitely decided that it is within these limits.

As soon as the added district was placed under my charge I wrote requesting a careful and complete survey of the boundaries, and that they be plainly marked. This has now been ordered, and I hope will soon be accomplished. It is most important that the east line be run to, definitely settle the position of these new mines; it is also important that the south line be run, and marked, for the protection of the large game that ranges in that part of the Park.

The west line is nearly coincident with the Wyoming-Idaho line, and its exact location must always be a matter of some doubt. I therefore recommend that the State line be marked instead. The question of cutting off a portion of the north end of the Park has often arisen, but I trust will never receive favorable consideration. The present line runs over the crest of a range of very high mountains and settlement on or near it is impossible.

One proposition is to make the north line the same as the Wyoming-Montana line; this would result in moving a collection of groggeries 2 miles nearer this place, which is most undesirable. The second proposition is to cut off all that part of the Park north of the Yellowstone, Lamar, and Soda Butte Rivers. This would throw out an extensive game country, especially the home of the mountain sheep, and permit settlements in dangerous proximity to a favorite winter range of all the larger animals.

HOTELS.

I am glad to be able to report a most satisfactory state of affairs in so much as concerns hotel accommodations. The building at this point is in the same state it has been in for many years past. It is excellently managed and gives satisfaction in every particular. The lunch station

at Norris is also excellently kept, and comfortable lodgings are provided for such tourists as elect to spend a night there; a few improvements have been made in the matter of wash rooms, closets, etc.—perhaps all that the use of the place will warrant.

The hotel at the Cañon is completed; is well and comfortably kept, but is a most unsightly edifice.

The Lake House has one wing completed, and this is all that will be needed until the tide of travel sets more in that direction. It is one of the pleasantest, best kept hotels in the Park, and deserves better patronage than it has yet received. I regard it as the most desirable place in the Park for a prolonged stay.

The old hotel at the Lower Basin was vacated about the middle of June, and the new building at the Fountain was then occupied. It is the largest, best built, and in every way the finest building in the Park, and I doubt not is destined to become one of the most popular. It is not yet entirely completed, but I learn that the management expects to have the workmen out of it by the end of this month.

It is very satisfactorily kept and I hear no complaints of it. There are no changes to report in the hotel at the Upper Basin; so long as the law prevents a valid lease for the site so long will the old shed remain rickety and unsatisfactory. The Trout Creek lunch station, under canvas, is quite the same as last year. On the whole I can report a very great improvement in hotel accommodations, with a most satisfactory state of management. Mr. W. G. Johnson, manager for the Yellowstone Park Association, is working hard and intelligently to remove from it the odium that has heretofore attached to it, and with a large measure of success. The complaints that have reached me have been few and trivial.

TRANSPORTATION.

Transportation in the Park has been carried on under the leases granted the Yellowstone Park Association. Mr. George Wakefield has managed it for a number of years, and he has as fine transportation as there is anywhere in the world; stages and harness are new, clean, and well kept; horses are gentle and in good condition; drivers sober, accommodating, and competent; there have been very few complaints of them, although perfection in this class of public servants is not always easy of attainment. A complaint has been made that stop-over privileges have not been freely accorded, but on representation to the manager the evil received prompt correction.

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BOAT ON THE LAKE.

The proposition to put a small steamer on the lake for the accommodation of tourists has been agitated for a good many years, but was only recently accomplished. Early in July an inspector came and gave the boat a license to carry 125 passengers. It is a smooth-running, seaworthy little vessel and will add much to the attractiveness of the lake as a resort. I hope to see it made a part of the Park transportation, and used in ferrying tourists from the Lake Hotel to the West Thumb in their journey around the circuit.

In July the Engineer Corps, U. S. Army, put on a small boat which they use in supplying their road camps with forage and provisions and in hauling lumber from the mill to the various points where it is

to be used. On invitation of Lieutenant Chittenden I accompanied him on a trip of exploration on the Upper Yellowstone, but for lack of sufficient depth of water we were only able to ascend the river a few miles.

TOURISTS.

The most ceaseless vigilance is needed to prevent tourists from mutilating the beautiful formations in the Park. I do not believe 10,000 men could *entirely* accomplish it. Ladies are the greatest specimen hunters, and often they do not carry their trophies farther than the hotels. By a careful supervision of the guides I have managed to keep this form of vandalism at a minimum. Another source of great annoyance is the persistence with which men will write their unlovely names on everything that is beautiful within their reach. This form of barbarism is confined almost entirely to *men*, and, if we may judge from the writing, to the boorish and illiterate.

About a week ago a stage coming into the Park from Beaver Cañon was held up and robbed about 20 miles beyond Park limits. I gave immediate orders for a careful search by all the patrols in that direction, but so far have got no trace of the thieves.

There is an unusually large number of people entering the Park with guns of various kinds. From those who are simply making a tour of the Park, with the purpose of returning this way, I take the arms and restore them to the owners on their exit. A great many parties, however, come this way with the intention of going out by Riverside or Jackson's Lake. For such parties I can only seal the guns, with admonitions not to break seals within Park limits. This is only a measure of security with such people as would not hunt inside the Park in any event. If others get in unfrequented localities I fear temptation would prove too much for them.

I am constrained to recommend that sufficient notice be given that from a fixed date, say June 1, all carrying of guns within the Park will be strictly prohibited. Exceptions can then be made, and special permits granted by the Superintendent to people of undoubted reliability.

FISH.

For the most part the lakes and rivers of the Park are literally filled with trout; I have never seen so many fish elsewhere as there are in the shoal waters near the borders of the Yellowstone Lake. Two years ago the Fish Commission began stocking the streams that were destitute of fish, and the work was continued last year. At the present time some members of the Commission are in the Park, making an examination of these plants. I hope they may yet stock some of the smaller lakes with black bass, and thus afford a variety of sport to the angler.

* * * * *

POACHERS.

So long as there is no law within the Park for the prevention of hunting and trapping, it will be a most difficult matter to break them up. Cook City, just off the northeast corner of the Park, is fed entirely on elk meat, and I doubt not a large proportion of it has been killed within the Park limits.

On my arrival here I was told that one Van Dyck was the principal

hunter for that place, and that his hunting grounds were near Soda Butte. I sent out three separate expeditions for him before he was finally taken, in his camp near Lamar River, with beaver traps and other evidences of his trade in his possession. I kept him in custody for over a month awaiting the Secretary's orders, and then turned him loose after confiscating all his property. He is now in Cook City once more, but I hear that he is conducting his expeditions outside the Park. As the killing of elk in Montana is absolutely prohibited by law for a term of years, it seems strange that this traffic at Cook can not be broken up.

I am satisfied that both hunting and trapping are carried on within the limits of the Park from over the western border. I shall make an endeavor to "encourage" the majority of these trespassers by bringing a few of them to justice this fall.

Mr. Ed. M. Wilson, who has been a most invaluable man as a scout, guide, and hunter, mysteriously disappeared on 27th July and left no trace behind. It will be quite impossible to replace him, for there is no man in the region who at once has the intimate knowledge of the country, and of the hunters and their methods, that he had.

I learn of three or four buffalo heads that have been mounted in Bozeman, Livingston, and other neighboring towns within the past year. I doubt not all of these were killed within the Park, or very close to the line without it. Such specimens are become very rare, and fine ones are held at \$400 to \$1,000. Such prices tempt the cupidity of the border pirates who live near, and with small equipment they can enter the Park on foot and take their chances of capture and the confiscation of their small stock in trade.

The most effectual way to break up this business would be the prosecution of the taxidermists who purchase the specimens—possession of which is prohibited by the laws of all the adjoining States. I have abundant evidence, however, that the buffalo are contented and quiet in the park and that they are on the increase. Some tourists who went through the park in May saw a herd of about 30, with several small calves, near the Trout Creek lunch station. About the same time some employes of the Yellowstone Park Association saw what was probably the same herd, and I saw there an abundance of fresh signs the first week in June.

In July I sent Wilson out to observe the herd that ranges near the west line of the Park. He found two small bands of about 30 each, one with 12 or 15 calves; in addition he saw several single ones and small bunches. I do not think it is exaggeration to say there are 200, and probably there are 400, within the Park, and that they are thriving and increasing.

The elk have increased enormously, and most conservative estimates place their numbers at 25,000, and I have no doubts of the presence of that many. Their continuance in the Park is assured, and their overflow into adjoining territory will furnish abundant sport for the hunter.

Mountain sheep, deer, and antelope are tame, numerous, and on the increase; as they are hunted but little, if at all, they are certain to be preserved. There are a few moose in the extreme southern part of the Park, whose numbers I shall endeavor to approximate during a trip that I hope to make to that country in October.

I presume trapping of the fur-bearing animals is carried on across the Park lines, but careful watching and one or two arrests have reduced it to a minimum. One or two more examples like that of Van Dyck will put an end to it.

CAPTURE OF ANIMALS.

On my arrival here I found authority to capture animals for the National Zoological Gardens at Washington, D. C. The appointment as hunter was given to Mr. Elwood Hofer, the most competent man in the country. Owing to scarcity of funds with which to pay him he resigned his appointment after two months, but continued to collect specimens. He has caught and turned over to me, and I hold awaiting shipment, two black bear cubs, three young foxes, two elk, and a black-tailed deer.

I also had two antelope, but one night about two weeks since some carnivorous animal broke into their inclosure and killed and ate them. When the time for shipment comes I can readily trap and add to the collection a number of the smaller animals, like wolverines, wolves, lynxes, martins, badgers, porcupines, beavers, etc. All can be shipped in one car, which should go under charge of an attendant.

Bears have become very troublesome at all the hotels, camps, slaughter-houses, and other places in the Park where there is anything for them to eat. They have not proved at all dangerous, but it is impossible to keep provisions anywhere within their reach.

I authorized the capture of one at the Fountain Hotel, but he died of a rupture of the heart in his struggles to escape. I had another caught in a trap there and he is now in the Washington gardens.

I have had 4 small bears caught; two I have still, one broke his chain and escaped, and one was eaten up by an old bear while he was chained in front of the house at Yancey's. As winter approaches I may find it necessary to kill an occasional one, especially if they become destructive of the game, or beef and mutton herds. By another season I hope to be able to supply specimens of all the animals native to the Park; their retention here during the season has proven very interesting to the tourists.

The Park is almost entirely within the State of Wyoming, and yet it is absolutely inaccessible from that State. If a part of the Government appropriation should be expended in making a road down the Snake River as far Jackson's Lake, I have no doubt connection would soon be made with it from some point on the Union Pacific Railroad, and thus a new and desirable route to the Park be opened. It is but a little more than a year before the opening of the World's Fair in Chicago. This will bring visitors here in numbers heretofore unknown.

No expenditure can be made of the revenues of the Government that will bring more satisfactory return than liberal, generous appropriations for the improvement of the Park. I venture to recommend an appropriation of at least \$100,000 for construction and repair of roads, with a suggestion that it be made available as early in the year as possible, that it may be expended while work on the roads is yet possible in the autumn. The amount of money at the disposal of the Superintendent is ridiculously inadequate. In place of the few hundreds that he has annually, he should have at least \$10,000 to be expended in policing camps, clearing up fallen timber, renewing sign boards, and the many objects properly under his care.

LAW IN THE PARK.

It seems hardly necessary to call your attention to the need of laws for the government of the Park. Senate bill 491, first session Fifty-first Congress, as amended and referred to the House Calendar, has much to commend it, and with a few modifications would effect all that can

be desired. For convenience the jurisdiction of the court should be on the Montana side, and the railroad charter (section 11) should by all means be omitted. Otherwise the bill is as nearly perfect as may be, and I trust the passage of it, or one similar to it, may be pressed and accomplished.

I am, sir, yours, most respectfully,

GEO. S. ANDERSON,
Captain Sixth Cavalry,
Act'g Supt. Y. N. P.

The SECRETARY OF THE INTERIOR.

REPORT OF THE ACTING SUPERINTENDENT OF THE YOSEMITE NATIONAL PARK.

CAMP NEAR WAWONA,
Mariposa County, Cal., August 31, 1891.

SIR: In accordance with your letter of July 28, I have the honor to submit the following report of the condition of affairs and of the management of the Yosemite National Park since it has been under my supervision during the fiscal year ending June 30, 1891.

Soon after the department commander had designated Troop I, Fourth Cavalry, as the guard for the Yosemite National Park, I procured an order to visit the park for the purpose of examining the ground and selecting a suitable place for a camp.

I arrived here with the troop May 17, established the camp, reported by letter to the Secretary of the Interior for orders, instructions, and suggestions, and immediately commenced examining into the situation.

These duties were entirely new to me and I had no idea of what they were. I managed to procure a copy of the regulations of the Yosemite National Park, from which I learned that trespassing of stock or persons would not be permitted. I wrote to the Department for copies of these regulations. I also wrote to the War Department for copies of maps of Wheeler's survey of this section of California. In the mean time I purchased a small township map of the Park which was printed in San Francisco. This is very defective topographically, but I was enabled by it and such information as I could get from the old mountaineers to approximately locate the boundaries of the park.

The lands within the boundaries of this park have been used as a grazing ground by the cattle and sheep owners for many years, and in order to begin what in this country is called a "square deal" with them I wrote a letter to every stock owner whose name and address I could learn in middle and southern California, notifying them that it was my duty to keep all stock off this reservation, and asking them as law-abiding citizens to use due diligence towards keeping their stock away, thereby aiding me in the execution of the will of Congress. When at a later date I received the regulations of the park, I distributed them freely and inclosed them in letters to about twenty post-offices in the four adjacent counties, requesting the postmasters to tack them up in a conspicuous place in their respective post-offices.

The cattle owners have generally tried to observe the law, but there are many small holders living in the vicinity of the park who are too poor to hire a herder, and whose old stock will drift up the various

cañons leading into the park as the feed in the foothills gets poor. This stock has given some trouble this year, but most of the owners have told me that they would dispose of such stock before the snows melt next year.

In order that the Secretary may become sufficiently informed of the situation here to enable him to make an intelligent report and recommendations to the Congress, I will describe the topography of the Yosemite National Park somewhat in detail, the roads and trails leading into and over it, the Indians and game living upon it, and the white settlements, claims, mineral and timber lands within its boundaries.

The meridian and parallel of latitude through Mount Diablo are taken as the lines of reference, the latter of which passes through the Park. Of the 42 townships which constitute the Park, 12 of them lie north of this line, the remaining 30 south of it.

The general trend of the summit of the Sierra Nevada Mountains is from the northwest to the southeast. The highest point within the park is Mount Lyell, 13,016 feet. Westward, and to a distance of from 15 to 20 miles from the summit, the country is rough, interspersed with bare peaks, intersected by deep and immense cañons, presenting to the eye a wild and savage appearance.

The principal water courses within the park are the Tuolumne, the Merced, and the South Fork of the Merced Rivers, with their numerous tributaries. The cañon of the Tuolumne, beginning in township 1 north, range 23 east, is impassable for about 30 miles. The cañon of the Merced, beginning in township 2 south, range 22 east—the well-known Yosemite Valley—surpasses description. The cañon of the South Fork of the Merced is deep, exceedingly rugged, but is passable at many points. The country between these streams is heavily wooded generally, and after getting out of the cañons has many features of the plateau and is passable. The tributaries of these streams have their sources well up toward the top of these plateaus, where the water percolates through the soil and gradually collects in comparatively level places, which are covered with luxuriant grass. These levels vary in extent from a few square feet to 100 acres, forming beautiful meadows set in the most magnificent forests in America.

The wagon roads which enter this park are three in number. They are all toll roads, and are owned by incorporated companies.

The only road entering from the south is the best and by far is of the greatest importance. Nearly all of the travel to the Yosemite Valley passes over this road. Stages pass over it every day during the season of travel, and it is kept in excellent repair. It leads from Raymond, a railroad station, to the Yosemite Valley, and traverses the park for 26 miles. It is owned by the Yosemite Stage and Turnpike Company.

There are two roads which enter the park from the west, the most southerly being the road from Coulterville to the Yosemite Valley. It is in very good repair and traverses about 25 miles of the park. It is known as the Coulterville and Yosemite Turnpike, and is principally owned by Dr. J. T. McLean, of Alameda, Cal.

The remaining road enters the park in township 1 south, range 19 east, and leads from Milton, a railroad station to the Yosemite Valley. It is kept in fair repair. It is known as the Big Oak Flat road.

A road of great importance to the troops guarding this park leaves the Big Oak Flat road about 5 miles after the latter enters the park, and traverses the entire park from west to east south of the Tuo-

lumne River, finally crossing this river at Tuolumne Meadows, and leaving the park near the southern line of township 1 north, 24 east. It was built 8 or 10 years ago, by a Boston Mining Company, to enable them to bring machinery to their mines in the vicinity of Tioga, and also to haul ore to the railroad. The mines have not been worked for the past 2 or 3 years, and the road has not been repaired during that time. A number of trees have fallen across it, and in places it is badly washed, but it makes a good mounted trail, and as such is of much importance. This is known as the Big Oak Flat and Tioga road. Recently I passed over this road from the crossing of the Tuolumne to its western terminus.

The most important trail through this park is known as the Mono trail, and commences at Wawona, and after winding up the side of the cañon of the South Fork of the Merced takes a northeasterly course, crossing the Merced River just above the Nevada Falls; thence, after heading many tributaries of this latter river, drops over the divide between it and the Tuolumne, crossing the latter at Tuolumne Meadows, and taking an easterly course, passes the summit through the Mono Pass or what is locally known as Bloody Cañon.

The Virginia trail comes down through townships 2 and 1 north, range 24 east, to the Tuolumne River at the lower end of the meadows. There is also a trail from Mount Conness to the Tuolumne Meadows.

The last trail worth noting enters the park from the head waters of Bull Creek, and reaches the Merced River just about where the western boundary of the park crosses it. It then passes up the river until it joins the Coulterville and Yosemite Valley road where the latter enters the foot of Yosemite Valley. There is a very indifferent road running from Mariposa to Hite's Cove, which is situated in township 3 south, range 19 east. The road runs diagonally through township 4 south, 19 east, to the southwest. The grade is exceedingly heavy and difficult. It is of no importance to this park.

There are several other trails of less importance that I am searching out and blazing to preserve them. They facilitate communication between different points, and their preservation is necessary to aid more rapid policing of the park. Since the stock will not be permitted to graze in the park hereafter, they will soon become obliterated and lost, unless measures are immediately taken to preserve them. If once lost they can only be recovered again by infinite toil.

There are about 35 Indians living within the boundaries of this park. They are the remnants of the Yosemite tribe, and have inhabited the Yosemite Valley and neighboring country longer than their traditions go back. They dress similarly to the whites, and some of them are quite intelligent. In summer they gain a livelihood by fishing, chopping wood, putting up hay, washing, and laboring about the hotels. In winter they hunt and do placer mining and such odd jobs as they can get.

Like all of their kind, they, with but few exceptions, will get drunk whenever they can get the liquor, but they are more steadfast than the white man, in that they will never betray the man who gets the liquor for them.

They have petitioned the Congress for an appropriation of \$1,000,000. But if left to themselves I can not see how this money would make them happier or improve their condition. A few designing whites would have the most of it in a short time, and it would beget homicide and crime among the Indians themselves.

The principal game in the park consists of bear, deer, grouse, and

quail. Neither variety is very plentiful. The sheep have been the curse of these mountains. As they graze in masses, they trample the nests of the quail and grouse to pieces, destroy the eggs, or crush the young before they are able to fly. They separate the young deer from the mother and cause its death from lack of nourishment. As the autumn approaches, the herds retire from the high mountains towards their winter grazing grounds, and the herders set fire to and burn over the forests in their rear so the rays of the sun can penetrate to and melt the snows, thus giving an early and abundant crop of grass the next season. I have effectually stopped such vandalism within this park, and now the possibilities are that it will be alive with game in a few years.

This report would be incomplete did I not note the kinds and varieties of timbers growing upon this park. But as my time is very limited I can but note the principal ones and the approximate elevations of their indigenous growth.

If I have the honor of being the superintendent of the park next year I hope to be able to make a more extended report upon this subject. I am devoting some time to the study of that wonderful tree the *Sequoia gigantea*, and have selected numerous places where I intend to plant the young sprout next spring.

Of the pines there are about nine varieties, and they grow at all elevations from 2,500 to 11,000 feet above sea level; the tamarack growing at the highest altitude of any other of the forest trees.

The cedar grows to great dimensions at from 4,000 to 7,000 feet.

There are about two varieties of spruce, and they grow at from 5,500 to 8,000 altitude.

There are about three varieties of the fir, growing at altitudes from 7,000 to 9,000 feet.

I have seen but few specimens of the juniper, which grows at an altitude of about 8,000 feet.

The black and live oak grow at 4,000 feet in the valley only. There are a few cottonwood and Balm of Gilead at 4,000 feet.

A few dwarfed quaking aspen grow at an altitude of about 5,000 to 6,000 feet.

The most wonderful natural growth upon this earth is the *Sequoia gigantea*, of which there are two small groves within this park. Their indigenous growth seems to be in this latitude at elevations between 5,500 and 7,000 feet.

The private landed interests within the boundaries of this park are probably much greater than the Congress knew of when so much area was included within its limits. I have succeeded by various means in getting data for an approximate statement upon this subject. It is questions growing out of these interests that are constantly arising and demand a great deal of thought and no little firmness on the part of the superintendent of this Yosemite National Park.

* * * * *

RECOMMENDATIONS.

The boundary lines are not well marked. They are simply neighborhood traditions. Thus far I have not had time to hunt the township corners or in any manner mark the boundaries, even if I could find them.

An appropriation for the purpose of establishing these boundaries is respectfully recommended.

I have devoted much time and thought to the subject of the boundaries of this national park, and after a careful examination of the ground I find that there are natural boundaries for the most of it. I hope I will not be considered over-officious if I state and recommend what, in my judgment, are the best boundaries.

The Tuolumne River forms a natural northern boundary following the Mount Lyell Fork to its source, and thence to the summit of Mount Lyell; thence along the dividing line between Mariposa and Fresno Counties to its intersection of the dividing line between townships 4 south, ranges 23 and 24 east; thence west until this western line intersects the south fork of the Merced River; thence down the south fork of the Merced River to its junction with the Merced River; thence down the Merced River to its intersection of the western boundary line of township 3 south, range 19 east; thence north along this western boundary line of township 3 south, range 19 east, until said north line intersects the Tuolumne River.

Such a boundary line will include all the natural wonders, excluding none whatever. It excludes about all the mining country on the east and nearly all in the southwest. It takes in all the immense forests worth mentioning that is now within the park. It excludes all the old agricultural districts in township 4 south, range 19 east, and it excludes a barren, rocky waste north of the Tuolumne River. It excludes no timber, the shade of which would keep the snows from melting until late in the season, and it includes the only portion of country that furnishes a reason for a national park.

I would also recommend that the Congress pass a law making it a misdemeanor for the violation of Rules 3, 4, 5, 6, and 7 of the Yosemite National Park, with the maximum fine fixed at \$1,000 and the maximum imprisonment fixed at 6 months, or both, at the will of the court of competent jurisdiction.

The limited time in which I have to write this report necessarily excludes smaller details, which I will forward in a supplemental report at the end of the season. I have mentioned only those subjects which I conceived would be of aid to the Secretary in his annual report.

Very respectfully, your obedient servant,

A. E. WOOD,
*Captain Fourth Cavalry,
 Acting Superintendent Yosemite National Park.*

THE SECRETARY OF THE INTERIOR.

REPORT OF THE ACTING SUPERINTENDENT OF THE SEQUOIA NATIONAL PARK.

The different branches of the Kaweah River, except the North Fork head on the western slope of a range of mountains 12,000 to 13,000 feet high, whose general direction is north and south. The top of this range is steep, bare, and rugged rock, broken and irregular, and passable in but very few places. It is a high wall that completely separates the country on one side from that on the other. Projecting from it in a westerly direction are the high ranges that separate the Marble, Middle, East, and South Forks from each other. Northeast of the park a ridge extends eastward from it to Mount Whitney, on the main divide of the

Sierra Nevadas. To the south of this ridge are the headwaters of Kern River, to the north those of Kings River. Mount Whitney is said to be the highest in the United States, and the mountains about the headwaters of Kern, Kings, and Kaweah Rivers to be the highest and roughest in the whole Sierra Nevada range. The only tolerably level ground of any extent in the park is in the two southern townships, where there are probably 300 to 400 acres of it. This portion of the park is known as the Tuohey Meadows, and also as the Hockett Meadows, though particular portions have special names, as Zimmerman's Meadows, Warren's Horse Camp, etc., but all lying in the Tuohey or Hockett Meadows. These meadows are in a flat basin at the head of the South Fork, at an elevation of little more than 9,000 feet and almost completely surrounded by mountains. The snow lies here till late and the ground was very boggy until about July 10. It is partly timbered, the open spaces having small lakes, streams, and grassy bottoms. It has for years been a favorite grazing ground for sheep and cattle, and the streams have been stocked with trout. It is one of the most picturesque spots in the park, and a delightful camping place during the latter part of July and August. The only other spot of special interest that I have visited is the Giant Forest. This covers four or five sections in the southwest corner of township 15 south, range 30 east, and northwest corner of township 16 south, range 30 east. It is in its natural state except for a number of cabins that have been built, and some ground fenced for cattle.

One tree, measured by Lieutenant Nolan, was 34½ feet in diameter and about 370 feet high. In other groves the sequoia trees are a very small proportion of the whole number, being scattered here and there among spruce, fir, and pine trees. In the Giant Forest, while the sequoias are still greatly in the majority, they grow more thickly and to a greater size than anywhere else in the park and, travelers say, than anywhere else in the State. Lieutenant Nolan, who has visited the General Grant Park, says there is no tree there that compares with some that grow in the Giant Forest. The tree known as General Grant has had the earth washed away near its roots, and 3 or 4 feet from the ground it doubtless measures more than any in the Giant Forest, but the main trunk is smaller. The conditions now existing in the Giant Forest seem to have been very favorable for its growth and preservation. The ground is uneven, and the growth of pines and other trees on the heights and around the big trees have kept the winds from breaking off their tops, have protected their trunks from the action of the weather, and kept the ground moist and of an equable temperature.

The safety of the big trees doubtless depends to a certain extent on the preservation of these others. The Government, at whatever cost, should never allow any private individual or corporation to have control of any portion of this forest, nor allow any timber to be cut in it. As it stands now, and as it ought to remain, it is probably the most remarkable forest of its kind in the world. The more one sees of it the grander it seems. To despoil it would be a desecration.

There are also big trees in other portions of the park, notably on the mountain slopes both north and south of the East Fork, in township 17 south, range 30 east, and south of the South Fork, in township 18 south, range 30 east, and a few elsewhere. Some of those north of the East Fork are on the Atwell estate, through which the Mineral King road passes, but finer trees are found farther west, in a more inaccessible locality. In no other grove, however, do they obtain the size of those in the Giant Forest, nor grow so thickly. A number have been cut

down in the vicinity of Atwell's Mill, and the value of the property consequently lessened.

The mountain range south of the two southern townships is lower than the next one to the north (the one between the South and East Forks), and the country beyond is generally lower than that in the park. I was unable to get into those townships during the month of June, owing to high water on the trail up the South Fork and snow on the mountains south of the East Fork. I was surprised in the latter part of June by the appearance of two herds of sheep in the valley of the East Fork that had come over the snow on the mountains between the South and East Forks. They had worked up from the south and found too much snow in the southern townships to remain there, and had come onto the East Fork. I mentioned my action concerning them in my last letter, as also in the matter of two herds of cattle that came up the wagon road about July 1.

The country northwest of the Giant Forest is quite low, comparatively speaking, and consequently free from snow early in the season. The high water in the main Kaweah River and North Fork kept any party of troops out of that country till after the middle of July, as the only practicable route to reach it is by the Colony road. There is no known trail across the Middle Fork above the mouth of the Marble Fork, nor up the mountains, if a crossing existed. The only other way would have been to have gone nearly to Visalia and then taken the road to Camp Badger, but I had not enough pack mules to spare to carry sufficient forage for such a detachment. I expected to find sheep and cattle grazing in that part of the park, but Lieutenant Nolan reports not more than a dozen cattle near the Colony sawmill and in the Giant Forest, and that only one herd of sheep had passed through the northern part of the park, and that it had gone through hurriedly. In the Hockett Meadows a few cattle, the property of Mr. Blossom, who lives on the South Fork, near Three Rivers, are constantly giving trouble, straying back as fast as they are driven out. With the above exceptions there has been no trouble from cattle or sheep in the Sequoia Park. On the other hand, General Grant Park, from its isolated position and being surrounded on all sides by loose cattle, is particularly liable to be overrun with them. The owners have been notified to keep their cattle out, but I imagine it is having very little effect.

At the Colony sawmill a detachment is stationed to protect the Giant Forest and patrol the northern portion of the park and General Grant Park. By the nearest route the sawmill is 50 miles distant from here.

At the foot of Big Red Hill, 6 miles above Three Rivers and 26 miles from here, is another detachment. At this camp a trail crosses the river that leads to the Giant Forest, and the detachment watches that trail and the road to see that no cattle are driven into the park. It also patrols the road in the park. In the Hockett Meadow is another detachment, about 18 miles from here, guarding that portion. Men are now at work trying to make a shorter route to this camp, on the mountainside south of the East Fork, and then from that camp to Big Red Hill. On the headwaters of the Middle Fork several hundred cattle and probably 5,000 sheep are grazing. They are just north of the camp at Mineral King and patrols watch them to see that they do not encroach on the eastern side of the park. Eastward, in the Kern River valley, there are sheep by thousands that formerly grazed in the park. The camp at Mineral King is necessary to guard the eastern line of the park, for as soon as cold weather sets in the sheep-herders will drive the sheep back through it, as has been their custom, unless prevented.

There will then also be danger from fires, as the herders, often through carelessness, let the dry brush and grass catch fire before they leave. This year it is thought they will do so out of spite.

The Mineral King district is also a favorite resort for people to stay in camp, and a base for hunting and fishing parties during the summer months. For about 6 weeks over 300 people have been camped within a mile of my command. In township 17 south, range 30 east, James W. Griffiths and a few persons, formerly members of the Kaweah colony, are living in section 7, Mrs. Maria W. Eyrie in section 8, and Mr. Jacob H. Tronger in section 20. They are all farming, and I am informed by Mr. Andrew Cauldwell, special agent General Land Office, that they are living on their own homesteads. The colony people live on land now owned, or formerly owned, by William Riddell. The Atwell estate, in the same township, has been rented by Mr. Irwin Bernard, a member of the Kaweah colony, who is cutting timber on it, and employs members of the colony only. With these exceptions, no land to which any one has a claim or title is occupied. A man is hauling posts out some years ago from land just west of the Atwell estate, that I am informed was bought by him from John E. Miller, who got it for cash from the Government. I get my information concerning land claimed or owned by any one from Mr. Andrew Cauldwell, who, I understand, has furnished the same information to the Department.

At the mouth of Marble Fork a single man by the name of Wolverton is living, and has cultivated a small piece of ground. Another, by the name of Bonneview, is similarly on the Middle Fork, just within the western line of the park. Lieutenant Nolan passed by the land they occupy, and mentions them in his report. Mr. Cauldwell knows of their occupancy, and says they have no claim whatever to the land.

Since commencing this paper I have received instructions from the Interior Department to make a report concerning patented lands, this having been brought about by objections to and inquiries concerning the conduct of the troops toward the people employed in cutting timber at Atwell's Mill. The foregoing is all the information I have concerning other patented lands. As the action of the Department and the troops concerning the Atwell Mill property may cause discussion hereafter, I shall make it the subject of a special report.

The valuable game in the park consists of deer, bear, mountain grouse, and California quail. Besides there are varieties of other animals, such as chipmunks, gray squirrels, ground squirrels, groundhogs, panthers, wildcats, coyotes, etc. In the rocky valleys, at low altitudes, are quantities of rattlesnakes.

The streams in the Hockett Meadows have been stocked with trout, and these fish are also found in the Marble Fork near its mouth, and a few miles below it in the Middle Fork. The streams are too swift and the falls too high for fish to ascend them any distance into the park. North and west of the Giant Forest the Marble Fork is a beautiful stream, in which I think trout would thrive. The headwaters of the East Fork, at Mineral King, have been stocked, and the trout propagate rapidly, but this is not in the park, and the waters are fished so much that the number is kept down.

Owing to the high altitude of most of the land in the park and deep snows in winter deer can live in only a few places in it in that season, and are forced into the foothills to the west. In the summer they go eastward and many through it. The same applies to grouse and quail. Although there is a State law against killing deer for 2 years, this is not a complete protection. I have heard of deer being killed in this

vicinity this summer, and numbers will probably be killed in the foothills this winter. After the law referred to expires the deer belonging to the park will have very little protection. A few deer have usually been found in the winter just within the park in the valleys of the Middle, East, and South Forks. Some years ago one of their principal ranges was about the headwaters of the Middle Fork, not in the park. The cattlemen and sheep herders have now made them very scarce there. Any one interested in game can not help wishing they could be better protected. For this purpose, if for no other, I should recommend that townships 15, 16, and 17 south, range 31 east, be added to the park. The mountain range in which the East and Middle Forks head would then inclose the park on that side and form a barrier that would to a great extent protect it, and materially lighten the labor of the guardians of the park on the east side. It would also to a great extent stop the travel through the park of landowners and cattlemen with cattle to their land now lying along the eastern boundary and avoid many occasions for dispute. It would also lessen the danger of destruction of many valuable trees from fire.

At Redwood Meadows, near the head of the Middle Fork, is a small grove of big trees. As long as land is owned by individuals in the townships I have mentioned they will insist, on account of the difficulty in reaching it in other ways, on using the Mineral King road and trails through the park. I understand from Mr. Cauldwell that very little land is owned in these townships. In the Mineral King district, in township 17 south, range 31 east, are a number of mines, none of which have ever paid for working them, and are not worked now except a few to a very limited extent, and principally only enough to keep the owners from losing their claims.

For the further preservation of game, and to keep it from becoming a nuisance to the settlers in winter, it would be well to extend the park westward, so as to take in all the land east of the North and South Forks. A post at Three Rivers could then watch the principal avenues to all parts of the park from the west. As this would include much land now taken up I suppose this extension would not be favorably considered. By taking in the eastern halves of townships 17 and 18 south, range 29 east, but little private land would be included, and the object of an extension to a great extent attained.

The Mineral King district is a great resort in summer for people from the Lower Kaweah Valley about Visalia and Tulare. As in the case of the troops, it is about the only camping place accessible to wagons that they can find. During July and August the heat of the valley is intense, and made more unbearable by the moisture from irrigating ditches and green vegetation. A daily temperature of from 102° to 106° or higher is the rule.

The bracing atmosphere of the mountains is of inestimable value to delicate women and children, and many men, some of them too poor to send their families to the seashore or elsewhere, have been in the habit of sending them to Mineral King. Should this district be annexed to the park, the privilege of letting them camp here as formerly, under proper restrictions, ought not, from a humane point of view, be denied them.

As there is no place in the park for troops to camp, either in summer or winter, some provision should be made to remedy this. If the Mineral King district be annexed, a summer camp will be provided, but troops must leave it by the 1st of October at the latest, when it is still too early to leave the park unguarded. There is then no place to

go nearer than the foot of Big Red Hill, about 6 miles above Three Rivers, and outside the park.

All the land along the main river from the bridge westward is owned by private parties, and it is only by courtesy that my command will have a place to camp when it leaves here, as it will have to do in a few weeks. If the park be enlarged, a winter station must be provided. It should be of sufficient extent to permit the troops to be properly trained, and should be a supply depot during the summer. The land should either be bought or leased. The most suitable place I have seen is along the main Kaweah, from one-half a mile to $1\frac{1}{2}$ miles below Three Rivers. Next year the favor by which troops were permitted to camp on private land before the park could be entered, and again after summer was over, may not be granted.

As I have implied, an extension of the park eastward would stop considerable travel over the Mineral King road. I was under the impression that this was a county road, chartered by the State, and that I incurred considerable risk in preventing cattle from being driven over it. Mr. Cauldwell, however, informs me that it was built by the miners of the Mineral King district about a dozen years ago, on public land, to take in machinery and carry out ore. After the mining excitement subsided, it was made a toll road by the mining company that owned it, but failed to pay expenses. It was transferred once or twice and finally bought by Tulare County for \$1,500 or \$2,000, and the county has no title to it.

Considerable work will always be necessary in the spring of the year to make this road passable. It is not probable the county will expend any money on it hereafter, and if soldiers must repair it, some way should be provided for their compensation.

There has been talk of the propriety of further extending the park to the eastward to the main divide of the Sierra Nevada range; also some distance farther to the south and northward, to take in King River Cañon and Tehepatee Valley, or even to the Yosemite. I have had no time to explore the country to the south, about the heads of the Tule River nor the Kern River or King River valleys. I wished to go to Mount Whitney, at the head of Kern River, but the round trip would take 10 days, and I was informed the country had been so overrun by sheep that I could find no free pasturage for horses and pack animals. The same lack of feed would prevent a trip to Kings River and to any distance down the Tule. Many tourists now go to Mount Whitney, and after the Giant Forest is more generally known it will be about the only other attraction in this section, except the Kings River Cañon and Tehepatee, which I understand furnish scenery equal, if not superior, to that of the Yosemite. But aside from objects of interest, the prosperity of the population living in the valley between the Sierra Nevadas and Coast Range depend upon the preservation of the timber and brushwood in the mountains, as is well known. I have stated in a former report that brushwood covers the lower slopes and foothills to an altitude of about 5,500 feet, where the timber commences and extends to between 10,000 and 11,000 feet wherever there is enough soil to support the trees. The brush and timber both assist in holding back the snow and preventing disastrous snow slides, and also by their shade in keeping the snow from melting too fast in the spring, thus preventing dangerous floods and keeping up a steady water supply till late in the season.

Sheep destroy much of this brush, and the herders often set fire to it in the fall to destroy it, as the ground will furnish a good crop of

grass next season. The best way to secure the safety of the brush and timber is for the Government to take charge of the country and guard it, whether it be called a park or not. Of course as the State is specially interested in this matter it would be proper for the State to attend to it, but as so many local interests would be involved the State might defer proper action too long to be of much use. Most of the land now belongs to the Government, and the difficulty of protecting it would probably grow less and less every year, until local dissatisfaction would disappear, when it could well be turned over to the State.

Knowing how much the welfare of a large population depends on this matter, I am in sympathy with any plan that will preserve the mountainous country in its natural state. Some game animals, now very rare and in danger of becoming extinct, might also be preserved. Formerly elk were abundant, but have been killed off. Horns of mountain sheep are sometimes found, but the last traces of live ones were seen about two years ago near Mount Whitney. There is nothing related to show that they have been killed, but the supposition entertained by many is that they have left the country on account of having been frightened by the proximity of sheep herders and having had their feed destroyed by bands of domestic sheep.

I renew my former recommendation that a competent surveyor be employed to mark the limits of the park. Only to-day I was asked whether a certain mine were in the park. I could not answer the question, nor do I know who can. I also renew the recommendation that penalties be provided for violations of the regulations prescribed by the Secretary. As it becomes more widely known that I have no power to make arrests, and that owners of cattle can not be made to keep them out of the park, the difficulties of enforcing the regulations will be increased.

Men of the detachment of troops in the two southern townships have been in the saddle every day looking for and driving out cattle. This duty is accompanied with great physical exertion and fatigue, as the men must walk and lead their horses up and down all steep declivities and over rough places, at an altitude where the air is very light, and when the same cattle are driven out over and over again, with no effective result, the men get disheartened and look on their labor as drudgery.

During the last 2 months my troop, as an organization under my command, has marched about 277 miles, mostly in that portion of the park south of the Middle Fork of the Kaweah and east of the park.

A patrol under Sergeant Tully marched about 75 miles; one under Sergeant Adams, 75 miles; one under Corporal Donner, rounding up and driving off sheep, 130 miles; a patrol under Corporal Fureman, rounding up and driving off cattle, 156 miles; a patrol to Giant Forest and General Grant Park, by Lieutenant Nolan, 207 miles; by different details of the detachment in Hockett Meadows, 970 miles.

I inclose herewith, with a map, Lieutenant Nolan's report of his trip to the Giant Forest and General Grant Park. Also a map and two reports of Sergt. Patrick Dougherty, in charge of the detachment in Hockett Meadows.

I also inclose a memorandum showing the strength of the command.

Very respectfully, your obedient servant,

J. H. DORST,
*Captain Fourth Cavalry,
 Acting Superintendent Sequoia National Park.*

The SECRETARY OF THE INTERIOR,
 Washington, D. C.

REPORT
OF
THE POSTMASTER-GENERAL.

POST-OFFICE DEPARTMENT,
Washington, D. C., November 30, 1891.

To the PRESIDENT:

In this my second statement of a full year's work of the Post-Office Department under your administration, I shall endeavor to show that the postal service is better in some respects than it was, but that it is capable of almost immeasurable improvement. It will not be necessary to record the successes or failures of proposed legislation in Congress, though I have had the honor of carrying into effect some very important legislation passed at the last Congress. This has been an administrative year. For what has not been done I am willing to take the blame.

I do not care so much for the credit for what may have been done; but if anything good has been accomplished I shall be satisfied with the year's work if it results in a closer scrutiny and a wider appreciation of the service, so that all the people who use the post, and whom I have tried to take into my confidence, may the more effectually insist upon the improvement of the service in the future.

I have never believed that the Department should rightfully be expected to be self-sustaining; but the fact is that the Congressional base of supplies expects it to be so, and I have consequently tried to draw better and more numerous efforts out of the whole service than formerly and at a smaller cost. The revenue has been upwards of five millions more than ever before. The deficit is unquestionably decreasing, and will entirely disappear in the next fiscal year, as per estimate. If Congress thinks it advisable, the service may commence to be self-sustaining on July 1, 1893.

The postal deficit disappearing.

The reorganization.

Within the Department itself several new things have been undertaken. The creation of the office of Fourth Assistant has permitted a thorough reorganization of the departmental forces to be made. The bureaus are doing better work because it is a special work, and the Postmaster-General is able to do better work because it is special. The scheme for promotions on merit, already inaugurated successfully in the Department, has been ordered to be extended to the larger post-offices and, so far as practicable, to the railway mail, and the opinion is general that the good effects of this scheme will inevitably be felt throughout the entire service.

The commission of expert accountants has settled upon a simple and uniform system of bookkeeping in all the post-offices, which has been submitted to the careful examination of the postmasters. A postal museum of considerable size and interest has been established, as the public will soon be able to see.

The anti-lottery law.

It has fallen to my lot to enforce the anti-lottery bill passed at the last session. Arrests and indictments have been secured everywhere, but only according to the plain and imperative duty of the Department, and the matter of the lottery companies is known to be practically driven out of the mails. Another historic act of the last Congress was the postal aid bill. That I am trying to execute.

The postal aid bill.

The measure hardly afforded what would be called subsidies, and the interests of the shipping people have been so little furthered by the shipping people themselves that great results may not follow immediately, though I have strong hopes that the treatment of this question from the departmental standpoint, which has tried to be somewhat business-like, may result in the beginning of a truly important subsidy policy.

The sea post-offices have proved a distinct success, and incoming foreign mail is now dispatched throughout the country anywhere from two hours to a week quicker than it used to be. I recommend the employment of a steam tug in New York Harbor to make this service more efficacious. The quinquennial session of the Postal Union at Vienna was attended with credit by two American delegates, and one or two good American measures were forwarded. I have been more than ever convinced by this meeting that registered mail ought to be insured, and I recommend that.

Work of Dead-Letter Office.

The postal people have made effectual efforts to prevent letters from going wrong. The Dead-Letter Office, as the

figures show, have never done such good work as now. It is original work, directories, newspaper articles, watchfulness; and the railway mail clerks have corrected the wrong addresses of over 7,000,000 pieces of mail matter within the year. So long as these are true facts, I think we have a right to state (what the figures again show) that nine-tenths of the letters that go wrong are faultily sent. I should like to see a branch of the Dead-Letter Office established in San Francisco, to save time and expense of transfer and retransfer across the continent, and I respectfully recommend it. I have directed that many changes be made in the Postal Guide, and it will soon be so cheap and so widely circulated that it will become a really important effectual factor for users of the mails.

It has been a really gratifying thing to see how much interest the postmasters have taken in the service. They have criticised the service freely and have encouraged their patrons to do the same, things which I like very much, not caring to expend my time on postal things that are done entirely right. The postmasters criticised my last annual report greatly to my edification, and I shall ask them to do it again. They submitted scores of arguments why a plan of postal supervision by districts ought to be authorized by congressional sanction. Their responses to my requests sent to the county seats, and the responses of over 45,000 of the postmasters visited for purposes of conference have been marvelously hearty, and I am sure that thousands of valuable suggestions, many of them small perhaps, but none the less valuable, are now ready for the consideration of the various Department officials.

The postmasters are zealous.

I commend a bill for the appointment of fourth-class officials, upon information furnished by supervisors, to the attention of Congress and of the postmasters themselves. It is a good thing to study. I recommend the abolition of personal suretyships of postmasters, as too many of them are under obligations which prevent the strictest performance of their best work; and finally, as still another measure for the usefulness of the service in all its ramifications, I recommend a very general extension of the money-order system and give the reasons why. The exploits of the transportation and railway mail bureaus may fairly be a source of pride to the gentlemen in charge of them. Of the nearly 8,000 miles of additional railway postal service established during the year almost three-fourths were applied to Western and Southern States.

Appointment of fourth-class postmasters.

Over 12 per cent more of city mail has been separated in

Accuracy of distribution. postal cars for instant distribution. The accuracy of the clerks is shown by figures to be higher than ever before and the percentage of error is not much more than one-half of what it was in the preceding year. I should like to urge more strongly, in view of this undeniable success, a reorganization of the service, and I plead especially for some means by which the dependents of killed and maimed postal clerks may be saved from poverty and suffering.

Pneumatic tubes. A somewhat marked country boy's instinct has not prevented me from taking the greatest interest, whether it has been effectual or not, in the postal needs of the great cities. The tubular-post question has interested me greatly, and friends of mine have gathered valuable material about European systems. I hope that the people of New York, Brooklyn, and other large cities, and the members of Congress who represent them, really mean that they want pneumatic tubes for the transmission of mails, for the system, though expensive in its introduction, is effectual and will certainly be self-sustaining if not profitable. I thoroughly believe in it. If great reforms do not come the small ones do. The Department employs stamp-cancelling machines, which remove some of the causes of errors in post-offices. I have the honor to discuss in another place the needs of a new building in New York City and the thorough reorganization of the service there, and I would not exclude from the investigations the pressing needs of Chicago, that we may be ready for the World's Fair.

House-to-house collections. It is possible to develop two new methods of quickening and making more frequent the deliveries and collections in cities. It would be marvelous to see a letter box for collections, as well as for deliveries, on the door of every man's house, but it is not impossible. It is entirely probable that the street railway post-office may be found adaptable and capable of great utility, and by utilization of both these means the mails will be accelerated almost beyond imagination.

I try never to forget the country. The appropriation of \$10,000 which the last Congress allowed for the free-delivery experiments did not seem a large sum, but it showed all signs of actually earning over \$3,000, and this most interesting fact is probably the beginning of universal free delivery, and that would mean countless benefits for rural dwellers.

Collections on star routes. I think we shall be able to deliver and collect mail along star routes, and successful experiments have already been made in the direction of rural deliveries in suburban places, by means of electric roads. I purpose to do away with the

renting of boxes in post-offices served by free delivery, because it is manifestly unjust that persons outside of the delivery should be charged for an inconvenience which they can not at present get rid of, and I earnestly urge that the bill to entitle towns as small as 5,000 population to enjoy the free-delivery service be passed.

The investigations of the year adduce plenty of good reasons why it would be a useful, economical, and patriotic thing to build generally small public buildings for post-offices. This question hardly admits of argument, the more so because of the antiquated, haphazard method of obtaining quarters.

I believe more earnestly than ever that the telegraph ^{The postal telegraph.} ought to be applied to the postal service so that the two great systems, like the railroad and postal service, may quicken and cheapen transmission of messages for the benefit of the unserved many; and I would make the application of the telephone to the postal service an adjunct quite as important, because of its susceptibility of extension into rural neighborhoods. The whole object of the postal system is to transmit intelligence.

A monopoly has prevented the adaptation of the quickest methods of communication to the great common method; but the fight of any monopoly is of necessity a losing one. Its character before the last Congress would have shown that if no other evidence had. The postal telegraph and postal telephone simply can not, in logical events, be kept away from the post. The proposition for their consolidation with it for the mutual benefit of each, is just as simple and businesslike as it ever was. I urge just as earnestly as ever, too, the experiment of postal depositaries, where the working people, who are remote from any opportunity to save, may become forehanded and prosperous.

There is great need of a wider transportation of packages ^{Wider transportation of packages.} by mail, but I do not urge it until the greater and more needed improvements in the service are made. One-cent postage, too, is not immediately to be undertaken, but it can be made possible by the 1st of January, 1894, if desirable, before the service is further perfected. It will come the easier if we let the reduction of the foreign rate wait a while; if we simplify inland postage rates so that all postages may be rightly collected; if we consolidate third and fourth class matter, and if we secure credit for the Government mails and other losing business, which the Department under present law is obliged to do. But I ask attention to a more detailed discussion of all these topics.

THE DEFICIT GRADUALLY DISAPPEARING.

New and costly
service required.

I took up, when your administration came in, the work of a year two-thirds gone, with the rate of expenditure for the year established; and when the year closed the actual cash deficiency of the postal service proved to be, by the final exhibits, \$6,227,919.43. In the two succeeding years six new States were admitted to the Union, calling for increased postal service, and the Territory of Oklahoma was opened up for settlement and had to be supplied with postal facilities. The controlling idea all the while has been to push the service into the new States and along the hitherto poorly served Pacific Slope, not neglecting the older regions of the country, and, without extravagance, to rebuild and enlarge the whole system.

\$1,000,000 lot-
tery revenue lost.

While I have insisted on a good service at any cost, unless made impossible by such physical conditions as are illustrated by the inadequate public buildings of New York on the Atlantic coast and Portland on the Pacific coast, nevertheless the cash deficiency has decreased. It amounted for the last year to \$6,160,205.19, which would have been much less but for the operation of the lottery law. This curtailed the revenue to the extent, it is estimated, of at least \$1,000,000 during the past year. While there is an increase in the cash deficiency over that of the previous year, the increase in revenue last year (1891 over 1890) amounts to upwards of \$5,000,000.

The post self-
sustaining in
1893.

To pursue this vigorous policy of extending and improving that the Department has adopted, without increasing the deficiency and in spite of the depreciation of the revenue due to the suppression of the lottery business, proves that the tendency of the system is towards better service at a lower cost. Much of the expense incurred within the last three years is in the nature of establishing a plant, which, being now in full running order, will not require as much outlay for the next few years, and it is already proven by the rate of expenditures during the past few months that the cash deficiency for this year will be lowered to not much over one-half of what it was last year, as appears in the financial exhibit; and the estimates for 1893, which have been prepared for the action of Congress at the coming session, show that the service may be made to reach a self-sustaining basis by July 1, 1893.

Basis of calcu-
lation.

This calculation, of course, is based upon unchanged rates of postage and a continued prosperous condition of the general business of the country, and with nothing beyond the

usual postal expenditures. No allowance is made for subsidies for ocean mail service, as the contracts are not yet let, and no provision is made for any new measures that Congress may authorize.

Only once in a quarter of a century, in 1882-'83, just prior to the inauguration of 2-cent postage, have the Department receipts met the expenditures, though for many years, if proper credit had been given for postal work demanded free by all the other Executive Departments, the postal service would have been self-supporting. Why the people should be expected by direct tax to supply annually all the money needed to maintain and extend the postal service I can not see. I can not see any more reason for this than for a direct-tax levy to cover the cost of ships for the Navy or to feed and clothe the Army.

But, nevertheless, when the Department seeks appropriations to meet the cost of enlarged postal service, and of increased expenditures resulting largely from the operation of law, the fact that a deficiency exists seems to stand in the way of favorable action, and postal employes go on working twelve hours per day without promotion or increased pay, and the service goes on as well as it can. I hope, therefore, that a clean balance sheet may soon be shown, and that the increased earnings may be devoted to raising the salaries of the many hard-worked postal and railway clerks and other patient toilers in the service, and may justify additions to the force, in order that the long hours now required for a day's work may be brought within reasonable limits.

Deficits prevent adequate appropriations.

DEPARTMENTAL REORGANIZATION.

The Postmaster-General long ago suggested the creation of a permanent fairly compensated office, to be filled by a comptroller or secretary, who should have the general management of the routine details of the Post-Office Department. A number of Congressmen did not look upon this suggestion with favor and it was never pressed. A strong effort made toward the end of the last session did result, however, in the creation of the office of Fourth Assistant Postmaster-General. The first Postmaster-General had one assistant. In 1810 there were two, and in 1836, when there were only 11,000 offices in the country, Postmaster-General Kendall asked for two additional assistants and got one. The fifty-five years delayed concession of an additional officer has now permitted an effectual reorganization of the Department, much on the lines contemplated in my early suggestion

The new officer.

The First Assistant master executive.

All transportation in the Second Assistant's office.

Better appointments; better service.

Work required of the Postmaster-General.

In the office of the First Assistant Postmaster-General are now consolidated the divisions of salaries and allowances, free delivery, money orders, dead letters, supplies, and correspondence. Persons having cases, begun or unbegun, with these different bureaus now apply directly to the First Assistant. He in turn, having the experience and the time, is able to confer with his division chiefs and dispose of innumerable details easily and wisely. A logical change, developing this same purpose to direct all branches of the work to their proper channels, was the consolidation of all the contract and transportation management in the office of the Second Assistant. This officer personally supervises the regulation and extension of the inland post routes and the ocean mail service and attends directly to the development of the Railway Mail Service, and, by reason of his familiarity with these coördinate branches of the service, he is able the better to serve each one. The Third Assistant Postmaster-General manages, as formerly, the divisions of stamps, finances, and registration.

The office of the Fourth Assistant Postmaster-General embraces the two very important bureaus of inspection and appointments, and for this reason is able directly to supplement the efforts of the First Assistant Postmaster-General towards an extension of the general business of the Department in numberless effectual ways. Under his direct management are the divisions of appointments and bonds, which are so important to efficient service. He not only appoints the fourth-class postmasters upon evidences of fitness (which he is better prepared to obtain than anybody else), and prepares the papers in Presidential cases for the consideration, first, of the Postmaster-General, and then of the President, but he is also able, having control of the bond division, to make certain that the Department is secured against unreliable public servants.

The most satisfactory phase of this reorganization is the Postmaster-General's own opportunity to address himself to large problems really affecting the improvement of the postal system. He is not obliged any longer to go over cases with persons who might better have seen somebody else in the first place. His time is not taken up with the consideration of papers which others can pass upon with knowledge more special than his own. He is able, rather, to confer with people who really ought to see him, to study ideas submitted to him for decision, or, perhaps, originate ones, and to devise some plan now and then by which something important may be done. The old system made it

almost impossible really to advance the postal service; it only kept alongside, or else a little behind, the growth of the country. There ought now to be time for the Postmaster-General to study how this, like other business—how much more detailed and splendid it is than any other business!—may perhaps be put a little in advance of the growth of the country. The service might always have been depended upon to run itself in a way. Now if improvements in administrative methods are not made, and if suggestions for legislative reforms can not be brought successfully to the attention of Congress, it is the Postmaster-General's own fault, and he might better retire to private life.

IMPROVED CIVIL SERVICE.

As intimated in my last report, I have endeavored to improve the civil service within the departmental service by a system of promotions and the equalization of salaries to labor performed. This plan went into operation July 1, 1891. It has succeeded so well that I have concluded, after consultation with a number of the postmasters of leading cities, to extend a similar scheme to all post-offices with fifty or more employes, and to ingraft it upon the Railway Mail, adjusting it to the present system of advancements by case examinations. From the smallest of the classified post-offices the workers will now begin to climb first through the various grades of the post-office, to the Railway Mail, and finally to the Post-Office Department. Even the announcement of this plan has caused a new zeal. Since the administration of President Grant there had been no competitive system of promotions in the Post-Office Department. Advancement in most cases was made on the personal solicitation of friends and not always by the merit of the applicant; so that not infrequently worthy clerks who deserved promotion were passed over in order to favor others less deserving. A great majority discovered that there was no recognition of merit and gave up the struggle for advancement. I felt certain there was but one way to bring about the greatest state of efficiency in the clerical force, and that was to give to all the positive assurance that advancement or reduction, retention or dismissal, would depend solely upon themselves, and that all should have a fair chance.

To bring about that desirable result I issued an order on the 24th of June, 1891, of which the following is a copy:

Order No. 227.—That there be and hereby is established in the Post-Office Department a board of promotions, to consist of the chief clerk of the Post-Office Department, the appointment clerk of the Post-Office

An enlargement of the scheme of promotions on merit.

The Departmental order relating to promotions by merit.

REPORT OF THE POSTMASTER-GENERAL.

Department, and three clerks of the fourth class, one from the office of the First Assistant Postmaster-General, one from the office of the Second Assistant Postmaster-General, and one from the office of the Third Assistant Postmaster-General, to which board shall be referred all questions of promotions in every clerical grade whatsoever. The three last-mentioned members of the board shall be designated by the three Assistant Postmasters-General, respectively, and vacancies in these three places shall be filled in like manner, subject to the approval of the Postmaster-General.

In case of a vacancy occurring in any one of the grades of clerks the said board shall determine and report to the Postmaster-General the name of the person who, according to the standard to be hereafter prescribed, is best fitted in their judgment to fill the said vacancy by promotion, and such promotion shall be made irrespective of the influence of friends.

The decision of the said board shall be based upon their ratings of examinations to be held under their direction, and the form and mode of such examinations shall be determined by said board subject to the approval of the Postmaster-General. The examinations shall be such as to show by their results whether, since appointment, the applicants have retrograded, or whether by experience and application they have become fitted for advancement, and they shall also take into account, health, habits, industry, and adaptability to the work.

The examinations prescribed by this order shall in all cases be competitive, and opportunity to take the same shall be afforded to all applicants from the next lower grade in the same bureau or office without special designation, and to all applicants from still lower grades in the same bureau or office, who may be specially designated by the head of the bureau or office in which the vacancy occurs.

The head of each bureau or office shall, from and after the 1st of July next, keep a record of each clerk, which record shall be kept in the mode prescribed by the board of promotions and approved by the Postmaster-General, and shall show markings upon attendance, ability, application, habits, and adaptability, and such other subjects as may be prescribed by the board. The board of promotions shall review these records at the close of each month, and shall report quarterly to the Postmaster-General whether in their judgment, based on said records, any reductions or promotions should be made.

Immediately afterwards record books were furnished to each of the offices of the Department, in which daily records were to be made upon the subjects mentioned in this order; and the board of promotions, having been duly designated, formulated a scheme of examinations, which was approved, and has since been in operation. It was decided that the examinations should consist of two parts; first a written examination on certain subjects, prominent among which should be subjects relating to the actual business of the Post-Office Department, and especially relating to the conduct of the daily work in the particular office where promotions are to be made. This written examination was counted for 40 points in relative importance in a total of 100 points. The second part of the examination consisted

How applicants have been examined.

of the reports from the heads of the bureaus or offices in which the applicants had been employed, which reports covered the six subjects of health, habits, adaptability, attendance, application, and industry, and these six together had a relative importance of 60 points in a total of 100. It is thus seen that one of the prominent features of this plan is the greater importance credited to the office record of a clerk in comparison with the results developed by the mere written examination.

The first examination was held on the 30th of July, at which 23 applicants appeared, although there was opportunity for but 2 promotions, one from \$720 to \$900, the other from \$900 to \$1,000. In both cases the successful competitors were women, the general averages at which they passed being respectively 89½ and 90. At the second examination there were 28 candidates for 6 vacancies, and since that time 41 applicants have been examined for 19 places, and the promotions won by the higher competitors have been made. In all there have been 92 clerks examined and 27 promotions made in a little more than three months.

The order quoted above contemplated also a general review of the books of record and reports quarterly whether on the basis thereof there ought to be promotions or reductions in the ranks of the clerks. The first review has just been finished with the result that the cases of inefficient, negligent, or incapacitated clerks have been pointed out unerringly by means of the office records, and the particular element or elements which go to make up the undesirability of the clerk in each case are also most clearly shown. It is therefore an easy matter to deal with these cases, and as a conservative beginning notice has been served upon them that unless improvement is shown in the future, their cases will be taken up for consideration whether reduction in grade or dismissal is not merited.

The results of this competitive merit system in the Post-Office Department have been extremely gratifying. There is a noticeable absence of pressure for the advancement of clerks who base their claims upon other considerations than just deserts. There is marked improvement in the quantity and quality of the work done from day to day, and a considerable diminution in the number and extent of petty absences.

By an order lately issued there is to be in every post-office of 50 employés or more, a local Department examining board of not less than 5 employés to be selected from the various divisions of the service by the postmaster,

Popularity of
the examina-
tions.

Reductions,
perhaps dismissals,
for poor
work contem-
plated also.

The promotion
scheme in the
large post-offices.

An upward
movement all
through service
hoped for.

subject to the approval of the Postmaster-General, who shall conduct similar examinations, and keep office records like those in the Department, and who shall also review the office records quarterly in order to determine whether promotions or reductions in grade ought to be made. Furthermore, in order to hold out to the employés of the postal service both in the classified post-offices and in the Railway Mail Service, an incentive to effort and excellence, the more lucrative and desirable positions in the general Department at Washington, it has been ordered that hereafter vacancies in the latter to which promotions from the lower grades can not be made shall be filled by transfer from the former within the limits of the regulations fixing the quota of each State. Notice to that effect has been given throughout the Railway Mail Service by the Second Assistant Postmaster-General, and similar notice to the employés by every postmaster whose force embraces 50 or more employés. From each is to be received once a quarter the names of those who, according to their office records, are most deserving of transfer to Washington; and by this means the clerical force of the Post-Office Department, itself strictly governed by a merit system, will be recruited from time to time as vacancies occur from a large body of employés who have had experience in the postal service and whose advancement depends entirely upon a similar scheme.

This system is not considered perfect, but it will be amended as time and experience teach; though, new as it is, it is certainly a long step in advance of the old plan. It reaches down to the lowest grade clerk, and there is no limitation of the time when the next promotion may take place. It creates no list of eligibles to be worn out with waiting, but gives the place promptly to the person winning it; and the same people can compete again for the next vacancy if they like. The examinations do not go over the same tests that secured the appointment, but take most largely into account the office record of the applicant, and a part of the record is open every day in each division that all may see the fairness and accuracy of it. I have for many years worked along these same business lines. Only their application to this Department is new. From the beginning of your term I have steadily advanced officials and clerks from the lower to the higher places. Now the system is established to take out of any one man's hands the arbitrary settlement of these questions under the influence of social or political friendships. This can be done more fairly and conscien-

tiously in a great Department like this from within than it can from the outside.

I recommended in my last report that physical examinations of applicants should be made for the heavy work of the railway mail and for porters in the large post-offices. Harder physical examinations. Because the present system sometimes gives us cripples, or men with imperfect sight, or weaklings wholly unfitted for the work, I have so far as practicable picked men from other parts of the classified service. I have also followed this course in selecting inspectors, and have gotten men out of the various departments with practical qualifications for this peculiar service, who, after the personal examinations by our officers, have proven to be much more effective than the general class of eligibles who are without experience in postal work, and very likely have no capacity for it.

It is true that any person certified and appointed may be dismissed if found unfit after proper trial; but such a course is costly, demoralizing, and discouraging when the same procedure for a new appointment is only to be followed with perhaps the same result. The proof in the failure of probationers. It is not uncommon to bear with inefficient probationers in the hope of educating them rather than dismiss them and go over the same ground; and it is not surprising that the proportion of railway mail eligibles who fail to do their work properly is a quarter or a third of those certified as fit for appointment. In 1885, 37.5 per cent. of the probationers were dropped; in 1886, 28.3; in 1887, 23.5; in 1888, 21.5; in 1889, 35.7 (but two months of this year were under civil-service rules); in 1890, 23.6, a full year of civil service, a portion of those retired having come in as probationers before civil-service rules were established; and in 1891, 29 per cent. have been dropped of the 946 probationers appointed between June 30, 1890, and June 30, 1891.

IMPROVED METHODS OF ACCOUNTING.

The commission which I appointed under authority of Congress to devise a practical uniform system of accounts for Presidential post-offices, after visiting a number of offices and acquainting itself with the methods in use in the Department and in the Sixth Auditor's Office, has made its report. This contains various recommendations intended to simplify the present system, and to render it more easy to understand, and to secure uniformity. An elaborate scheme of blank forms has been carefully considered at the Department, and a few amendments have been made by its officers. Better book-keeping for post-offices. These forms are reproduced in miniature in an appendix, so that postmasters may study them and make suggestions to the Postmaster-General for their improve-

ment. It is my purpose to furnish them to all Presidential offices, so that hereafter an inspector who learns how to examine one post-office may know without further study how to examine every other.

The forms of
accounting pro-
posed.

The forms embrace the following: a cash book, a detailed statement of envelopes received, a detailed statement of envelopes sold, a statement of stamps and cards received, a statement of stamps and cards sold, a cash book of special request envelopes, a cash book for request envelopes in transit, a box-rent register, forms for box-rent receipts, forms for key-deposit receipts, a box and key register, a record of Government property, and a form for a daily summary of business.

THE POSTAL MUSEUM.

The project of a postal museum started last year bids fair to exceed all expectations, both in respect to the number and value of the articles contributed and in respect to the general interest likely to be excited by the exhibits, as also in the beneficial results of a wider knowledge of the postal affairs of foreign countries, which have shown a fraternal spirit in furtherance of the enterprise.

Articles of in-
terest contrib-
uted by foreign
countries.

Among the most interesting foreign exhibits are models of German mail wagons, showing the arrangements for carrying mails and passengers alike. From Austria come letter boxes of unique patterns, photographs of public buildings, and portfolios showing the blanks, books, and forms of the Austrian postal savings-bank system and of the Austrian collection service. There are an Austrian post-horn and Hungarian mail boxes. From Australia is contributed a handsomely framed photograph of the public buildings in Victoria, bordered by a complete set of genuine Victoria postage stamps uncanceled. From England there are post-marking instruments, photographs of parcel-post wagons, wagons used in the royal mail, and tandem tricycles.

Canada contributes specimens of its letter boxes; a box for the conveyance under seal of valuable mail matter; a complete set of letter carrier's uniforms, the carrier's helmet for summer and his cap for winter, his heavy clothing for one season and lighter for the other, the Astrakhan cap and collar, leather leggings, chamois vest and storm coat.

From India there are models which exhibit in a most life-like way even to the reproduction of the features and forms, the Calcutta letter carrier, the stamper in the post-office, the mail wagon driver, and the native mail runner, who also carries with him a spear as a weapon of offense and defense.

One of these spears has been sent, containing around the shank a string of sleigh-bells which jingle as the runner goes, the purpose being to frighten off poisonous reptiles. There is also a model of the camel post and of the native runner crossing a stream with his mail bag, on a raft of earthenware pots, and a model of the tonga, a wagon used on hill roads.

From our own country have been received scores of relics of the postal service. Hundreds of photographs of post-offices and postmasters, ancient books, a ball of twine made from waste scraps which a postmaster was years in putting together, a specimen of a mail chute for high office buildings in cities, from the Treasury Department photographs of all the principal public buildings in the United States, a photograph of the oldest postmaster, and a copy of the first post route map, constructed at a time when the whole postal service of the United States could be described in half a dozen lines.

American articles donated.

ENFORCING THE ANTILOTTERY BILL.

The execution of the act of September 19, 1890, concerning lotteries has been effective enough almost entirely to divorce the mails from the business of the lottery companies. The decrease in the revenue of the post-office at New Orleans attributable to the enforcement of this act was apparent at the beginning, and it has continued without intermission. The mails are no longer used by the Louisiana State Lottery Company for the transmission of printed matter in packages or unsealed envelopes. Its patronage of the post is now limited to letters and packages under seal, and I have reason to believe that such matter is sent only to points that can not easily be reached by the express companies. Statistics show that during the calendar year of 1889 there were received at the Dead Letter Office 11,206 lottery letters, or an average of 938 letters per month. During the first six months of 1890 5,686 lottery letters were received, or an average of 947 per month. During the next five months of the same year—these include about two and a half months succeeding the date of the approval of the anti-lottery act—there were received 2,507 letters, or an average of 519 per month. During the eleven months beginning with December, 1890, and ending with October, 1891, 686 letters containing lottery tickets were received, an average of only 62 per month. At present the average is less than 40.

Lottery matter divorced from the mails.

The fidelity of the Department in trying to enforce the

almost unanimous wish of the last Congress is also shown by the number of prosecutions begun for violations of the law of September 19. These are shown in the report of the Chief Post-Office Inspector, from which I reproduce the following statements:

Arrests, indictments and fines.

Total number of arrests from September 19, 1890 (the date the law went into effect), to June 30, 1891.....	153
Total number of indictments by grand juries during the same period	75
Total number out on bail awaiting action of grand juries	73
Total number of convictions.....	56
Total number discharged from custody (no case made out).....	1
Average amount of bail required (from \$200 to \$5,000) in each case, \$1,000.	

For period from July 1, 1891, to October 23, 1891:

Total number of arrests	49
Total number of indictments by grand juries	578
Total number out on bail awaiting action of grand juries	42
Total number convicted (fined from \$5 to \$200 each)	3
Average amount of bail required (from \$100 to \$5,000) in each case, \$800.	

No purpose to make the law odious.

The disproportion of trials and convictions to the number of arrests and indictments is accounted for by the usual delays of the law (the failures to reach the cases on the dockets, the postponements of the trials to subsequent dates or terms, etc.), and not to any lack of judgment of the inspectors. We have been cautious not to make the law odious. As its provisions were in many respects new, violations of them were frequent. Besides, as the mailing of all letters, etc., concerning lotteries, and of circulars and newspapers containing "any advertisement of any lottery or gift enterprise of any kind offering prizes dependent upon lot or chance," was prohibited, we have necessarily ruled that schemes of this kind conducted by individuals and firms, by newspapers in the effort to extend their circulation, or by the managers of enterprises for the assumed benefit of the public or for charitable objects, came within the prohibitions; but in no case of which I have knowledge has any person who was believed to have acted without intent to violate the law been dealt with strongly, until he was advised to desist.

The great variety of lotteries.

The definition of the term "lottery" as "a scheme for the distribution of prizes by chance" is so well fixed, having been adopted by the courts, State and Federal, in scores of decisions, that I have felt justified in applying it in every case that has been officially brought to the notice of the Department. It would seem from the thousands of such

cases, sometimes numbering from two to five hundred per day, brought to the attention of Department officials—often in the earlier period of the operation of the law as amended—that certain enterprises, especially those conducted by many manufacturers of tobacco, and manufacturers and venders of nostrums, cheap watches, jewelry, etc., that the gambling spirit is indeed alarmingly prevalent. It was not my province to pass upon the morality of these schemes. It was my duty to determine, if possible, if they came within the prohibitions of the law when they were properly brought to book; and this I have done, declining, however, to submit cases for prosecution until ample opportunity was given to offenders to abandon their schemes.

In my last report reference was made to the fact that the Louisiana Lottery Company was trying to transfer its business, including its correspondence, from the mails to the express companies; and I assume, not without reasons, that as its patronage of the post decreases the carriage of its matter by express companies increases. Some of the expresses have instructed their agents and employés to refuse the business of the Louisiana lottery, but the instructions are ineffective, because packages are sometimes smuggled into the express by persons not known to be connected with the lottery, but more frequently because the employé is either indifferent to his instructions or in sympathy with the lottery; and it is not disputed that such matter is received and conveyed without dissent by express companies professing to refuse it, when offered by connecting lines forming a part of the entire route over which it is to be carried.

Lottery business of the express companies.

Other companies, as for instance the Southern Express, openly receive and transport all printed matter offered by the lottery company and its agents, sealed or unsealed, and all sealed packages, presumably of written or partly written matter, insisting that they are prevented from either making special inquiry as to the contents of the packages or of disturbing the seal. Their position is that as common carriers they are bound to accept anything tendered for carriage not of a kind to endanger the lives of their employés and others, or injurious to health, or destructive of property in their custody; and that, furthermore, as lottery matter was excluded from the mail it ceased to be "mail matter," and can not be construed as matter to which common carriers have the right to refuse transportation. In support of this latter view they cite the case of *Ex parte Jackson*, re-

The refuge of the express companies.

ported in 96 United States Reports, 727, in which the Supreme Court of the United States say:

But we do not think that Congress possesses the power to prevent the transportation in other ways as merchandise of matter which it excludes from the mails. To prevent rival postal systems it may, perhaps, prohibit the carriage by others for hire over postal routes of articles which *legitimately* constitute *mail matter*, etc., but further than this its power of prohibition can not extend.

Facts for
prosecution.

Notwithstanding the force of this language in its application to the carriage, out of the mails, of matter declared by the anti-lottery act to be unmailable (which may seem to show that Congress would not have the power to forbid unmailable matter from being carried by express companies), I have believed it to be imperative to obtain the facts on which a prosecution may be based, and I have done so. These facts I shall report at the proper time to the Attorney-General with a view of obtaining a decision upon the constitutional question involved. They would have been submitted to him before this; but other constitutional questions involving the life of the act—as, for instance, the power of Congress to deny to publishers the right to mail, or offer for mailing, newspapers containing lottery advertisements; the provision declaring the offense of mailing to be continuous; and the legal question whether foreign premium bonds, government and municipal, to the plan of redeeming which there is a scheme of distributing prizes by drawing in addition to the principal and interest—are presented by cases pending before the Supreme Court. If the law shall be overthrown in these particulars it will be useless to attempt its enforcement in minor ones, or to extend its enforcement in other directions. If it should be settled that the carriage by express companies of matter relating to lotteries can not be prevented under existing law, it would be well to consider whether, under the power to regulate commerce among the States conferred by the Constitution on Congress, the transmittal of such matter from one State to another can not be prohibited by additional legislation.

Influx of for-
eign lottery mat-
ter.

As soon as it was discovered that the rigid enforcement of the lottery act had driven a large portion of the business of the Louisiana State Lottery Company out of the mails, the managers of similar institutions in foreign countries, acting on the supposition that matter in foreign mails would not be subject to equal surveillance, thought to supplant the business of the Louisiana company by sending their circulars and tickets in sealed envelopes to all parts of the United States. Instances have come to the notice of this Department where such matter was sent to nearly all the

inhabitants of a given town. These foreign lotteries are chartered by their respective governments. In some instances they are conducted as a part of the revenue system of the government. It was useless, therefore, to seek the aid of their governments in preventing or discouraging the mailing of such matter into this country; and, of course, no matter thus received under seal could be detained on the mere suspicion that the envelope covered contents relating to lotteries.

It was, however, manifestly unjust to permit foreigners to enjoy privileges denied to our own citizens; and it was also evident that, if nothing were done to rid the domestic mails of such matter, the law would be practically useless. The penalty clause of the law would not apply to the officers and employés of the foreign lottery concerns for the reason that the act of mailing, which constitutes the offense, occurs in another jurisdiction. By the vigilance of the post-office inspectors prosecutions were begun against some of the officers and employés of a Mexican lottery, just across the border from El Paso, Tex., and service was obtained upon them by finding them within the limits of the United States; and those prosecutions have been so earnestly pushed that the practice, hitherto so common, of crossing the river and depositing the lottery mails in the El Paso post-office is now quite discontinued. This had a very salutary effect in ridding the mails of letters and sealed circulars emanating from other Mexican lotteries.

Prosecutions of
the Mexican lot-
tery.

The Secretary of the Treasury, in a recent ruling, held that lottery tickets and lottery circulars and advertisements are liable to customs duties as "printed matter." Article 11 of the Universal Postal Union treaty forbids the mailing of any article from one administration to another which, under the laws of the country of destination, is liable to customs duty; and as lottery tickets and lottery circulars and advertisements are liable to such duty, and as they are nonmailable under the lottery act, they are unlawfully in the mails, and are treated by customs officers, under Treasury regulations, as "forfeited goods." Postmasters at exchange offices were required, long before the enactment of the amended lottery act, to stamp matter which they had reason to believe contained dutiable articles with the words "supposed liable to customs duties." When a letter or sealed package, thus indorsed, reaches the office of destination, the postmaster must require the addressee to open it in the presence of the customs officer, or in the presence of such person as may be designated by

Lottery matter
liable to customs
duties.

the customs officer for that purpose; and if the package is found to contain lottery tickets or lottery circulars, it is surrendered to the customs officer to be disposed of in accordance with Treasury Department regulations. This plan, which evidently conforms in all respects to the customs laws as well as to those relating to the postal service, has resulted in relieving the Post-office Department from carrying a vast amount of unlawful matter received in the mails from other countries.

It may be of interest to note that of the 2,259 newspaper editorials, published in 850 papers, which have come to the notice of the Department during the past year, 2,172 have opposed the use of the mails by lotteries, and 87 have favored it.

AMERICAN MAILS UNDER THE AMERICAN FLAG.

Not a new project.

To carry American mails under the American flag was the object of the postal aid bill passed by the Fifty-first Congress. The same purpose actuated the First Congress in 1789, when the third act of the first session to receive the approval of President Washington was one imposing a harbor tax on all foreign vessels. The effect was soon felt in a preference for American bottoms. The existing navigation laws, restricting coastwise trade to American vessels and prohibiting the registry of foreign-built ships, were also enacted by the First Congress, and the records of the time show practical unanimity in its support. The measure was cordially approved by Thomas Jefferson and by John Adams.

From 1790 to 1812 a commercial contest raged incessantly between Great Britain and the United States, involving hostile enactments by the former and prompt retaliation by our Government, varying in stringency from increased taxation to actual embargo, and culminating in our second war for Independence. From 1815 the contest was continued, Great Britain interdicting our vessels from certain of her colonial ports and the United States retaliating with the act of 1820, which in two years compelled England to open her colonial ports to our ships on the same footing with her home ports under the treaty of 1815, with the modifications of the convention of 1818.

Promoting. Postal and commercial measures not partisan.

During this period, when the united energies of the American Nation were bent, without reference to parties, towards the promotion and defense of the merchant marine, our tonnage grew from 700,000 to 2,000,000, while the highest

total of foreign tonnage entering and clearing from our ports during any year of that period was 900,000. At this point the era of subsidy was inaugurated by England, whose statesmen despaired of further success by indirect aid or favor. The pioneer subsidy was that granted to Samuel Cunard, who received \$400,000 a year for four wooden sidewheel steamers, aggregating about 5,000 tons, and costing it is said, not more than \$200,000 apiece; that is to say, the British Government subsidized Cunard's four steamers to the extent of 50 per cent per annum on their first cost.

But two American subsidy bills, prior to the present one, have ever become laws. Both of these were of direct application to particular lines of steamers, and neither subsidy was continued long enough to demonstrate the general effect of the system. These were the Collins and the Pacific Mail subsidies. The former was enacted to meet similar legislation by the British Government in favor of their transatlantic trade in the infancy of ocean steam traffic, and the latter for the purpose of promoting our maritime commerce in the Pacific. The Collins Line subsidy was soon withdrawn, and that company, unable to compete with the heavily subsidized Cunard Line, was driven out of the trade. The Pacific Mail subsidy caused an immediate and important increase in the capacity of that line, but the methods by which the advantage was secured rendered it an easy prey to stockjobbers, who, when it suited their purpose to injure the company, published the operations of the lobby, and caused a speedy repeal of the law. Since that time efforts have been made to enact subsidy laws in various forms; some proposing special rates of mail pay to vessels in the South American trade, others providing certain tonnage bounties on a mileage basis.

History of subsidy.

The bill now in force is the first of general application. It contemplates a general system of postal compensation, based upon classified efficiency as to tonnage and speed of ships, leaving the administrative work of selecting routes and establishing service discretionary with the Post-Office Department, and providing for the ready conversion of the employed vessels into auxiliary men-of-war. The rate of compensation is by no means liberal; in fact, many persons conversant with the conditions under which American merchant steamers must be operated consider it below the limit of practical encouragement.

The subsidies paid to steamship companies during the

year 1889 (from "general statistics of the postal service," published by the international bureau, Berne, Switzerland, in 1890) were as follows:

What other nations pay.	France.....	\$4,953,112.41
	Great Britain	3,210,434.37
	Germany, so far as can be ascertained.....	1,261,400.00
	Italy	1,957,947.40
	Spain.....	988,977.02
	Japan	739,576.00
	British India.....	293,186.30
	Netherlands	167,446.80
	Belgium	152,139.30
	Chile.....	48,250.00
	Denmark	44,152.50
	Roumania	926.63
	Tunis.....	386.00

Estimated postal receipts.

With receipts for foreign postages estimated to average \$1,700,000 per annum, and an outlay for this service not exceeding \$600,000 per annum, it would seem as if the sum turned into the United States Treasury from this source might properly be applied to the encouragement of an American marine and thus reserve to American enterprise the rewards for carrying American mails.

The Post-Office Department, under existing laws limiting compensation to sea and inland postage, or to sea postage only, as the case might be, could not command any ocean service. It could only use such service as offered and was entirely dependent upon commercial conditions as to dates of sailing. These considerations and the manifest desire of the people to strengthen our naval fleets resulted in the passage of the bill of March 3. This act looks in five specific directions:

What the new act aims at.

First. To secure regular and quicker service to countries now reached;
Second. To make new and direct commercial exchanges with countries not now reached;

Third. To develop new and enlarge old markets in the interest of producers and consumers under the reciprocity treaties completed and in progress;

Fourth. To assist the promotion of a powerful naval reserve; and

Fifth. To establish a training school for American seamen.

The general consensus of opinion among all classes of business men familiar with shipping was found to be that, in view of the additional cost of construction of ships in America, the higher wages of American seamen, the increased outlay for running expenses to maintain the speed

required for mail steamers, over and above the average speed of freight and traffic steamers, the mileage compensation under the law was considered inadequate and not attractive to capital seeking investment. There were also others who held the belief that, by reason of losses incurred in past years by owners of American steamships, equity demanded that the appropriation of the last Congress should be divided among the lines, and that the Département was not justified in making specifications that would require even improved service in the future. This view was not concurred in by the Department, and, after inviting conferences with representatives of the shipping interests of all the important ports, the Department, on the 15th of last July, advertised for fifty-three lines of service, ten of them to Great Britain and the Continent, twenty-seven to South America, three to China and Japan, four to Australia and the Pacific islands, seven to the West Indies, and two to Mexico. The object of the numerous specifications in the advertisement was to open the way, within the scope of the law, for bids in any form most agreeable to capital and enterprise. It was not expected that bids would be made for more than fifteen lines, and naturally there could not be much competition for immediate service with the very few American-built vessels in existence. The bids were opened on the 26th of October, and were as follows:

By the "Columbia Safety Steamship Company, Boston, Mass.," on route No. 4, weekly service, from Boston to Liverpool, via Queens-town, in vessels of the first class, at a compensation of \$4 per mile one way; service to begin October 1, 1894. The proposal.

By Wm. H. T. Hughes, of New York, N. Y., on route No. 11, service once in three weeks, time out eighteen days, from New York to Buenos Ayres, in vessels of the second class, at a compensation of \$2 per mile one way; service to begin December 1, 1894.

By United States and Brazil Mail Steamship Company, New York, N. Y., on route No. 13, service once in two weeks, from Newport News to Rio de Janeiro, Brazil, in vessels of the third and fourth classes; service to begin January 1, 1892.

By Pacific Mail Steamship Company, New York, N. Y., on route No. 28, service once in two weeks, New Orleans to Colon, in vessels of the fourth class, at a compensation of 66½ cents per mile; service to begin November 1, 1891.

By John B. Clarke, Chicago, Ill., on route No. 30, service three times a month, from Galveston to Laguayra, Venezuela, in vessels of the fourth class, at a compensation of 66½ cents per mile; service to begin April 26, 1893.

By New York and Cuba Mail Steamship Company, New York, N. Y., on route No. 31, service once a week, from New York to Turpan, Mexico, via Havana, in vessels of the third class, at a compensation of \$1 per mile; service to begin February 1, 1892.

By New York and Cuba Mail Steamship Company, New York, N. Y., on route No. 32, service once a week from New York to Havana, in vessels of the third class, at a compensation of \$1 per mile; service to begin February 1, 1892.

By New York and Cuba Mail Steamship Company, New York, N. Y., on route No. 35, service once in two weeks from New York to Santiago de Cuba, via Nassau, in vessels of the fourth class, at a compensation of 66½ cents per mile; service to begin February 1, 1892. Invalid, an officer of the bidding corporation appearing as one of the sureties.

By Boulton, Bliss, & Dallet, New York, Y. Y., on route No. 36, service three times a month from New York to Laguayra, Venezuela, in vessels of the third class, at a compensation of \$1 per mile; service to begin March 1, 1892.

By Pacific Mail Steamship Company, New York, N. Y., on route No. 42, service three times a month from New York to Colon, in vessels of the third class, at a compensation of \$1 per mile, service to begin November 1, 1891.

By Pacific Mail Steamship Company, New York, N. Y., on route No. 44, service three times a month, from San Francisco to Panama, calling at intermediate Mexican and Central American ports along the west coast, in vessels of the third and fourth classes, at a compensation of \$1 for third and 66½ cents for fourth class. Service to begin in fourth-class vessels November 1, 1891.

By Pacific Mail Steamship Company, New York, N. Y., on route No. 47, service once in twenty-eight days, from San Francisco to Hong-kong, via Yokohama, in vessels of the third and second classes, at a compensation of \$1 for third and \$2 for second class vessels. Service to begin November 1, 1891.

Three of these bids are informal and it is to be regretted that the expected service to Brazil was not offered in proper form, owing to an error of the steamship company, and that the transatlantic mail is still to be carried under a foreign flag though in part by vessels owned by Americans and controlled in a measure by Great Britain under subsidy pay. While the proposals offered are with two exceptions upon old routes of travel, each is for practically new service in two respects: First, for a peremptory, prompt, and regular service; and, second, for quickened service, shortening the time between ports. The decrease in transit time is:

From New York to Buenos Ayers from twenty-nine days (formerly via Brazil) reduced to eighteen days, a saving of eleven days.

Advantages
under the bids.

From New York to Colon, where for the first two years reduced from eight days to six and one-half days, a saving of one and one-half days, and after two years when the entire new fleet of faster ships are finished there will be sailings once a week, and the voyage will be reduced to six days, a saving of two days, or one-fourth less time.

From San Francisco to Panama, touching at San Diego in addition to former ports, from twenty-one days to sixteen days, during the first three years, sailing every ten days, and for the remaining seven years by new and faster ships once a week in fifteen and one-half days, a saving of five and one-half days, or in three-quarters the former time.

From San Francisco to Hongkong, via Yokohama, during the first two years once in twenty-eight days, time reduced from eighteen days to sixteen; the remaining eight years the trips are doubled by sailings every fortnight in new and fast ships, reducing the voyage to thirteen days from Yokohama, a saving of five days, with a probability of a still shorter voyage.

From New York to Curaçoa, time reduced from seven days to six days.

From New York to Santiago de Cuba, time reduced from eight to six days, a saving of two days.

From New York to Havana and Mexican ports; time to Havana reduced from four and a half and five days to three and three-fourths days, a saving of one and one-fourth days.

From Galveston to La Guayra, via Colon, is a new service.

To accomplish the above schedule the Pacific Mail Steamship Company will have to spend from six to seven millions for new ships, and the line to Argentine Republic if accepted will require nearly three millions for three new ships. The fortnightly service to China displaces an English line which has already arranged to withdraw.

Ten millions of dollars for new ships.

It is stated with some credence that one or more of the very few American lines would have been obliged to go out of business but for the prospect of assistance from the Government, which now enables them to compete with other subsidized lines, who otherwise would have monopolized trade for other countries. If contracts are completed with all companies whose bids seem to be in proper form, the service will probably begin from the 1st of March, and the sum necessary to be appropriated for the remainder of the fiscal year will not be more than \$247,354, in addition to the appropriation for sea and inland postage already put into the estimates for this year. For the next fiscal year, from June 30, 1892, to June 30, 1893, there will probably be needed \$561,518, for which an appropriation will be necessary, as the estimates for that year only include the amount of sea and inland postage. The exact amount can not be ascertained until the contracts are executed. It is estimated that under this act there will be ships of a total tonnage of 109,000 tons carrying the American flag, in addition to the tonnage under the flag but not under the act. Some of the old ships will give way to the new, and additional ships will be necessary for the increased speed required. The companies will be obliged to build fifteen ships immediately.

Service to begin promptly.

The United States, with its large population, and larger ocean mails than any other country except Great Britain, has the smallest subsidy. The disproportion is most ap-

parent in the subsidies paid to the China lines on the Pacific Ocean. This country paid \$23,162.79 last year; the English Government is said to pay \$1,289,622.50 (£265,000) per annum. Direct communication with New Zealand, via Honolulu, by American ships from San Francisco is likely to be terminated because of the insufficient pay under the recent act. If American commerce has prospered with few ships and without direct or regular mails, it ought to grow beyond parallel when American brains and energy seek markets for cargoes of American goods, sure to go with every American mail steamer.

SUCCESES OF THE SEA POST-OFFICES.

Tri-weekly
service; twelve
steamers.

The sea post-office service between the United States and Germany, recommended in my last annual report, was established December 24, 1890, with the North German Lloyd Steamship Company and the Hamburg-American Packet Company. The service is triweekly, and it requires twelve regular steamers. One-third of them are of the Hamburg-American line. Every steamer is provided with one clerk from this Department and one clerk, with a man to handle the mail sacks, appointed by the German postal administration. The expense is borne equally by the two Governments. The expense to this Department for the entire service has averaged about \$400 per trip. The American clerks appointed are all carefully selected from the Railway Mail Service, and as there is no exception to this rule the results have been marked by a high degree of efficiency from the first.

What it means
to the inland
country.

By an intelligent, rapid system of separation, familiar to railway postal clerks, all articles in the mails between the United States and Germany are carefully distributed so that at the termination of the voyage they can be immediately delivered or forwarded to inland destinations. This effects a saving of from two to fourteen hours at the New York post-office. Trunk line connections at the metropolis have been secured by which from four to twenty-four hours have been gained in the delivery of inland mail along the direct lines and from two or three days to a week at points served by branch railroad and star route lines. Business men in Chicago and St. Louis have been enabled to return replies by the same steamers from which they have received their foreign communications. The closing of the outward mails does not take place until ten minutes of sailing time, and this custom has proved of such convenience that the post-

master at New York has been instructed to assign, after the close of the supplemental mail at the post-office, a clerk provided with a mail bag at the gangway of each outgoing steamer to receive letters bearing the usual supplemental postage.

From the beginning of the service to the 30th of June last the following steamers have been employed: *Havel*, *Eider*, *Fulda*, *Trave*, *Spree*, *Aller*, *Lahn*, *Saale*, and *Ems*, of the North German Lloyd line; and *Columbia*, *Augusta-Victoria*, *Normania*, and *Fuerst-Bismark*, of the Hamburg-American line. Additional steamers are required occasionally when the regular vessels are temporarily displaced. Up to the end of the fiscal year in June these steamers had made 39 trips from Germany and 33 from New York. In the westward trips an average of 57,860 letters and postal cards were distributed per average trip of sixty-nine working hours in addition to the treatment of a large amount of printed matter, of which no record is made.

The amount of work performed.

The sea post-office service has become one of the most important postal departures of the year, realizing the highest expectations of its utility and suggesting still larger possibilities of practical value. It is hoped that some arrangement may be made to assort the English and French mails in transit, and overtures have been made to the postal authorities of these foreign governments to adopt the system now in force between America and Germany. The sea post-office may surely be applied to vessels sailing under the postal aid act.

Hoped-for extensions of the service.

A POST-OFFICE STEAM TUG.

In order still further to advance the foreign mails arriving and departing at New York, and to make the sea post-office service as effective as possible, I ask Congressional authority for the purchase and equipment of a small steam tug, similar to those in use in the customs service, to be at quarantine, and under the doctor's supervision take off the foreign mails as soon as the boats drop anchor there. Frequently the steamers are detained two hours or more waiting for the port physician, and another hour is lost in reaching port and docking. Sometimes there are 1,500 pouches of mails on a single steamer, among them hundreds of Southern and Western pouches, that should not be hauled up to the New York post-office and then distributed, but should be distributed from a mail boat which should carry them direct to the railroad trains. The Jersey City ferries and the Forty-

Would expedite all foreign mails.

second street station for Eastern mail could be reached with equal ease.

THE POSTAL UNION AT VIENNA.

History and
purposes.

The United States has always been greatly interested in the Postal Union. In 1863, at the instance of the Post-Office Department of this country, the leading postal officials of the world, being aware of the enormous possibilities of postal communication due to the development of steam communication on land and sea, had a conference in Paris; but it was not until 1874 that the general Postal Union was formed at Berne. It was composed of the United States, of the countries of Europe, with the exception of France, of Asiatic Turkey, and of Cuba. Its purpose was to make a single postal territory of all these countries.

The principles of the treaty which it was necessary to sign provided that the actual carriage of mails should rest with the country of origin; that between two neighboring countries this duty should cease at the boundary; that each country should keep the whole of its postal collections; and that each should give the same transit advantage to foreign as to domestic mails. In the matter of votes the participating States were equal. Almost all of the civilized countries had entered the union by the time of the third meeting at Lisbon in 1884.

Things accom-
plished by the
union.

This year's meeting at Vienna, which was attended by Mr. William Potter, of Philadelphia, and Capt. Brooks, superintendent of foreign mails, was signalized by the adhesion of the Australasian colonies. It was agreed that every country should supply the public with a reply-paid postal card; that the postal card of one country posted in another should be sent to its destination like an unpaid letter; that the postage on letters posted on board a mail packet at sea should be prepayable by means of the stamps of the country to which the packet belongs; and that for letters posted on board ship in a foreign port the sender should use the stamps of the country to which the port belongs. The allowable size of packages is now a foot in length, 8 inches in width, and 4 inches in thickness.

Indemnity, reg-
istry, and frauds.

I very cordially urge the suggestions of the United States delegates to Vienna for three measures of legislation necessary to give this country a full participation in the benefits of the Postal Union. The first is to provide for indemnity for the loss of registered letters. The United States of America, with two or three of the South American republics,

are the only members of the union which now refuse to recognize this responsibility. The second measure was to provide a uniform charge for registered letters. The almost universal foreign equivalent for the registry charge is 5 cents, and this reform, as well as the other, I cordially urge upon the attention of Congress. The treatment of frauds upon the postal revenue by means of counterfeit or washed stamps is not now uniform; the third measure that is urged is a sharp insistence upon this uniformity.

The Postmaster-General's proposition for a universal postage stamp was rejected because of the serious difficulty of obviating the differences of currency, the variations of exchange, and the incidents of the money market; but the reply postal card was adopted, which was a partial concession to the American delegates; and it was developed that if England and her colonies and the United States were to follow up this departure there was nothing in the new convention to prevent these two powers from adopting, among themselves, the reply-paid postage stamp.

The action of the Union in fixing Washington as the next quinquennial meeting place was unanimous and cordial, and I can not too strongly plead that the members of Congress and the postal officials who may chance to have in hand the encouragement and direction of this important conference in 1898 may show the large generosity customary to this country when the representatives of foreign powers are to be entertained within our borders. I offer the services of at least one private citizen, if it is his good fortune to be living, towards making that an administrative and social success.

INDEMNITY FOR LOST REGISTERED MAIL.

There is one measure which would go far to popularize the registry system, and that is, to afford a limited indemnity to senders for lost registered matter. Despite the almost absolute security of the registry system, there is some hesitation among the public to patronize it, because the Government assumes no responsibility for the safe carriage of matter, and fails to afford any indemnity for losses. The fear of loss has caused a system of insurance by private enterprise of matter committed to the mails. The private insurer, of course, does nothing to contribute to the safety of the mail, nor to aid in the recovery of lost matter. He simply charges for assuming the chances of loss, and the fact that he is enabled to do a profitable business at a moderate charge is the best possible tribute to the efficiency and security of the mail service.

The Govern-
ment ought to in-
demnify.

There is no reason, however, why the tax of private insurance should be imposed upon the public, even though it be upon a groundless fear, as the Government could well afford to grant a limited indemnity for lost registered matter without increasing the fee for registration. It would not be advisable, however, for the Government to attempt a full reimbursement of valuable inclosures lost in the mail, as such a measure would necessitate a verification and record of the inclosures, both at the mailing and the delivery offices, not only imposing much additional work, but opening a wide door to collusion and fraud. It will probably be sufficient, at the start at least, to fix a limit, say of ten dollars, with discretionary power in the Department to allow a less amount when it shall appear that the value of the article lost does not reach that sum. For an equally manifest reason, indemnification should be confined to cases of total loss and not include cases of tampering.

Benefits of the
registry of mail.

The proposed step, if authorized by Congress, would take from the ordinary mails and place under the security of registration great numbers of valuable letters which now pass without check or receipt, a constant source of temptation to weak or dishonest employes. If the public could be induced to place their valuable letters in the registered mails instead of in the ordinary mails it would greatly lessen the labors of the post-office inspectors in examining and reporting upon depredation cases. So greatly are the disadvantages of sending valuable matter by the ordinary mails appreciated by the British Government that any piece of matter found in such mails and appearing to contain money, watches, or jewelry is arbitrarily transferred to the registered mails and a quadruple registry fee is collected upon delivery unless the suspicion as to its valuable contents proves unfounded.

No great ex-
pense involved.

There need be no fear that the proposed indemnification would prove onerous to the Government. The number of domestic and foreign registered letters sent through the mails during the past year was 11,148,960, representing about three-fourths of the total number of pieces of all kinds of mail matter registered. With a due allowance for some cases yet under investigation the number of pieces of first-class matter lost in the mails during the past year is estimated at 918, or, say, one piece out of every 12,144 of such pieces registered. At an allowance of \$10 each, the proposed maximum, the cost of indemnification would have been less than \$10,000.

The principle of indemnity has been adopted in their domestic systems by nearly all the postal administrations embraced within the Postal Union. The terms of the International Postal Union provide for the indemnity of international registered matter; but it would be inconsistent for this country to reimburse losses of matter received from foreign countries so long as it denies the privilege to registered matter in its domestic mails. The following is a list of the countries reported to the International Bureau, with the amount of indemnity allowed by each in its domestic service:

	Amount of indemnity.	Value in U. S. currency.
1. Germany.....	42 mark.....	\$9.995
2. Austria-Hungary.....	20 florins.....	8.12
3. Belgium.....	50 francs.....	9.65
4. Bulgaria.....	50 francs.....	9.65
5. Colombia.....	10 pesos.....	8.30
6. Costa Rica.....	10 pesos.....	8.30
7. Denmark.....	20 kroner.....	5.36
8. Dominican Republic.....	10 pesos.....	8.30
9. Egypt.....	£2 (Egyptian money).....	10.00
10. Spain.....	50 pesetas.....	9.65
11. France.....	25 to 50 francs.....	\$1.82 to 9.65
12. Great Britain (without extra fee).....	£5.....	24.35
13. Greece.....	25 drachmas.....	4.82
14. Hayti.....	50 francs.....	9.65
15. Luxemburg.....	50 francs.....	9.65
16. Norway.....	20 kroner.....	5.36
17. Netherlands.....	20 florins.....	10.05
18. Persia.....	25 krans.....	3.75
19. Portugal.....	9,000 reis.....	9.72
20. Roumania.....	50 francs.....	9.65
21. Servia.....	23½ dinars.....	4.53
22. Siam.....	20 ticals.....	5.00
23. Sweden.....	50 kroner.....	13.40
24. Switzerland.....	15 to 50 francs.....	\$2.89 to 9.65
25. Italy.....	25 francs.....	4.82

Other countries indemnify.

No indemnity is paid by the following named countries: United States, Bolivia, Brazil, Paraguay, Congo, British India, Japan, Chili, and Uruguay.

I recommend that authority be granted to the Department to pay a limited sum in compensation for loss of registered mail, and if this be thought not advisable, that the registry fee be reduced to five cents.

LETTERS THAT GO WRONG.

The dead-letter office reports that more than 6,800,000 pieces of original dead mail matter have been treated during the year. This is an increase of 4½ per cent of matter treated, but as compared with this year's total volume of mail matter, which was 8 per cent larger than last year, it is a greatly reduced percentage. The total increase of dead matter this year was 311,000 pieces; the increase in letters alone sent through the mails was nearly 150,000,000.

Fewer dead letters.

Of the opened letters more than 30,000 contained money aggregating nearly \$40,000; about 35,000 contained com-

mercial paper of a total face value of more than \$1,800,000. Last year, and the year before, too, the figures were practically the same. One hundred and seventy thousand letters which were returned to the writers failed of delivery and again came to the Dead-Letter Office. Of the unclaimed and undelivered matter 420,000 were letters misdirected, or only partially directed, a relative increase; and 65,000 of these, also a relative increase, were of foreign origin.

Millions redi-
rected.

These figures make no account of the more than 7,000,000 imperfectly addressed letters withdrawn by the Railway Mail Service to be supplied with correct addresses by the post-offices at the railway centers. Of the domestic misdirected letters, the addresses of 66,000 were corrected and the letters were forwarded; but 13,000 failed of delivery and were returned and treated over again. One hundred and five thousand were letters held for postage. One hundred and eighty thousand, a relative increase, were letters addressed to persons at hotels. Almost 43,000 were letters addressed to fictitious addresses. This correspondence largely related to "green goods" swindles.

Money in the
mails returned.

Eighty thousand domestic parcels were received. Six thousand and five hundred were misdirected, and 17,000, having been insecurely wrapped, had no addresses at all. Nineteen thousand, a relative increase, were not transmissible as parcels. Thirty thousand of the domestic parcels were either forwarded to their destinations or to the senders, and 37,000 await either reclamation or the auctioneer. Thirty thousand contained \$48,000 in money; of these 21,000, or 70 per cent, containing almost \$38,000, were returned, and the rest were made over to the Treasury. Of this last \$9,000 or more, \$4,400 were comprised simply in blank envelopes containing coins found loose in the mails.

The most of the undelivered money turned into the Treasury comes from the dupes of the "green-goods" swindlers; and, as these remittances are usually under fictitious names, the identification of the senders is impossible. Thirty thousand letters were found to contain papers aggregating in value \$1,800,000. Ninety-five per cent of these were restored. Forty-one thousand contained photographs; of these 30,000 were restored. Of the 140,000 letters containing stamps, 125,000 were returned to the writers.

Five million seven hundred thousand letters contained inclosures of no value. Of these 1,740,000 were returned to the writers; 10 per cent of these failed to reach the addresses given in the correspondence of the writers, and the

number of letters of this class actually restored, therefore, ^{Where the public make mistakes.} was 1,570,000, an increase of 111,000 over the number restored last year. Fully one-half of these five and three-quarters millions of letters contained nothing by which the writers could be identified. Unaddressed letters gone wrong are a class of mail which shows no possible fault on the part of the service. Of these letters, bearing no superscription whatever, the last three decades show the following increase: the number in 1870 was 3,000; in 1880, 9,000; in 1890, almost 28,000. Of the increase of 311,000 pieces of mail matter received during the year almost one-third comprised circulars sent as letters and found to be impossible to return.

Nine letters out of every ten that go wrong, go wrong because of the carelessness of the senders. But what, in addition to observing the suggestions hinted at above, is to be done about it? The Dead-Letter Office has done some things already. It has circulated very generously among the papers, and the papers have very kindly printed, brief ^{How to prevent the mistakes.} statements of the causes why letters go wrong. It has compiled and distributed to the larger post-offices a directory of all the streets in the free-delivery towns of the country, which has been of great and will be of increasing value. In the improvements in the Postal Guide, which I hope soon to be able to distribute by the million, I purpose to set forth some hints with reference to using the mails which the public ought to have. In time this will surely prove to be efficacious.

Persons mailing letters might with excellent effect put something on the inside or outside by which the sender or the addressee might be found. Care might be taken, in sending letters to cities, to put on streets and numbers, for experience teaches that three-fourths of the letters addressed "general delivery" never reach the addressees, because the addressees trust the free delivery so much that they never think of going to the general delivery. ^{Care required in addressing.} The return request printed or written in the corner of the envelope is a convenience to the Department and a double convenience to the sender of the letter, for a letter so marked, if not called for, is returned at once to the sender, who knows as quickly as possible that his message has not reached its destination.

The public often write addresses imperfectly or illegibly. They are careless about writing the names of towns and States. They seal letters insecurely, or put on additional mucilage and cause letters to stick together. They use ^{Common errors.} dark-colored envelopes and then pencils or light ink. There

is frequently too much printing on the face of the envelope. For these and other reasons, mostly and justly chargeable to the public, the Dead-Letter Office has been obliged to work early and late, as above outlined; and the Railway-Mail Service has turned into the different division headquarters during the year ended June 30, 1891, over 7,200,000 pieces of mail matter about to go astray. The errors which are properly chargeable to the Department are mainly due, I think, to the rapidity with which the insufficient forces of railway-mail and post-office clerks are obliged to handle the mails in order to make the necessary connections, and to a lack of physical strength and application, due to the youth of many of the clerks necessarily appointed to the service.

Publishers who
are careless.

I beg to refer to the carelessness with which many of the publishers of periodicals dispatch their large volumes of mail. It is a matter over which the Department has no control, and yet, inasmuch as there is an annual loss to the Department from the carriage of printed matter, it seems that the Department might properly ask the publishers of all periodicals to oblige their patrons, and incidentally the hard-pushed postal clerks, by addressing pieces of mail matter and bundles of pieces, with the utmost clearness and care. In innumerable cases the wrappers are printed paper, and the superscriptions are hard to find, if not utterly illegible when found. Publishing offices are careless in the folding of papers. Many periodicals are not folded at all, and the postal clerks who handle this class of matter in the cars or in the post-offices are made folding clerks for the publishers; and a matter of still greater annoyance, under these annoying circumstances, is the common fact that the addresses are written or printed in all sorts of irregular positions. For these causes thousands of pieces of newspaper mail, quite as much desired, no doubt, as letters, go wrong; and hundreds of thousands of pieces are delayed because of the time required by the postal clerks to do the work of the clerks in the publishing offices.

Watchfulness of
the public in-
vited.

In this matter, and in the matter of mail gone wrong, I wish that the closest scrutiny of the public might be aroused, that complaints might be brought in all cases where errors due to the Department, as well as to the public, have been discovered, and that in this way the public and the employés of the Department both might be permitted to learn the proper lessons. Then, too, the Department would be blamed for perhaps one-tenth part of the errors, and the Postmaster-General would no longer be charged by attentive and discriminating opposition journals with personally

appropriating all the money and valuables that fail of delivery because they have been wrongly sent.

DEAD LETTERS ON THE PACIFIC SLOPE.

The States and Territories of the Pacific slope are so far from the capital that they almost constitute a distinct postal section of the country. The transaction of business between that vast and important section and the headquarters of the Department is subject to much delay and inconvenience. I can see no reason why mail matter imperfectly addressed or otherwise unmailable should always be sent to Washington to be there treated and reshipped across the continent to be returned to senders.

Two weeks
could be saved.

In the case of advertised and unclaimed matter, too, the same loss of two weeks is inevitable. The establishment, in connection with the San Francisco post-office, of a branch Dead-Letter Office, to which should be sent all matter originating west of the Rocky Mountains, would seem to be not only a measure of departmental economy, but largely promotive, as well, of the convenience of a considerable proportion of the patrons of the mails. This branch office should work upon the same lines approved by long experience as the main office at Washington does, and should, of course, be subject to the supervision of the Department. I earnestly urge its establishment.

CHANGING THE POSTAL GUIDE.

An important change has been made in the Postal Guide. Both the annual and the monthly editions have been purged of the advertising that made the publication so discreditable to the Department. I hope to make the guide of real value to the Department by making it of real value to all the patrons of the Department. The annual edition can be at best hardly anything more than a reference book for the postmasters; we propose to make it a good reference book. It will contain, besides the list of post-offices, such information and such interpretations of the postal laws and regulations (and such orders relating to them), as a postmaster is required thoroughly to know and frequently to refer to. The most radical changes, and the most beneficial ones, however, will be made in the monthly edition.

A book for the
whole public.

I propose to make this partly the organ of the Department and partly the means by which the Department takes the public into its confidence—as much as possible the cause of a true understanding of the details of the postal

Cheaper and
improved.

service and of a minute appreciation of its benefits if they are properly used. If the Postmaster-General wants the postmasters to make suggestions for the improvement of the service, he can ask them through the Monthly Postal Guide; if he wants to ask the public to give him their opinion of a proposed reform, he can use the same medium. He can ask the public to be careful to direct mail fully and distinctly, and to complain to the proper authority of any irregularity in the service that they may run across.

If the guide is taken in large enough numbers it is evident that the cost can profitably be brought down to a cent instead of five, and may be distributed by the hundred thousand, perhaps by the million, by postmasters to their patrons. I have great hopes for its efficacy in informing people everywhere as to the operations of the service and the true methods to be pursued if it is to be perfected in every way. The most important agency in perfecting it is the intelligent criticism of all who use it.

CRITICISMS OF POSTMASTERS.

In conformity with my purpose to enlist the thought and effort of all in the elevation of the service I caused the following order to be sent to several hundred of the principal postmasters soon after the publication of the last annual report:

Full and frank
opinions asked
for.

POST-OFFICE DEPARTMENT,
OFFICE OF THE POSTMASTER-GENERAL,
Washington, D. C., January 15, 1891.

DEAR SIR: The Postmaster-General has caused to be sent to you a copy of his annual report for this year. He directs me to ask if you will kindly study it, and write him, *as fully and frankly as possible*, what you think can properly be said, either against the recommendations contained in it or in support of them. He desires to gather the best practical postal opinion obtainable from all quarters of the country as to the best means of improving the postal service in *every branch and detail*. The Postmaster-General would therefore be much indebted for an early reply to this request.

Yours most respectfully,

MARSHALL CUSHING,
Private Secretary.

The responses were immediate and hearty. Four hundred and thirty-nine postmasters wrote replies. Three hundred and seventy-five of these offered valuable suggestions. Two hundred and sixteen of the postmasters discussed postal telegraphy, 214 favorably and 2 unfavorably. One hundred and seventy-eight discussed postal savings banks, 166 to favor them, 12 to oppose them. One hundred

Postal tele-
graph first; then
depositories;
then 1-cent post-
age.

and forty-four discussed 1-cent postage, 13 to favor it, 131 to oppose it for the present. I consider these figures very significant, first, as illustrating the relative interest which these three leading topics excited among the persons most likely to think of them and discuss them from practical standpoints; and second, as showing in another way the differing degrees of favor with which the propositions are received by the same well-informed and inquiring minds.

It may be said that the postmasters would discuss the measures apparently dearest to the Postmaster-General's heart with the same relative enthusiasm which he himself had displayed. This objection does not hold, because they were especially requested to be frank, and because the replies were written and received confidentially, and because, further, I do not myself know personally what opinions are to be attributed to the different postmasters. Furthermore, I should not have been the wiser, nor would anybody have been the wiser, if particular critics had not commented at all upon particular subjects. The figures given really indicate an almost unanimous belief among the observers most likely to measure public opinion with the eyes and ears of their own logic that postal telegraphy is a proper, easy, and immediately needed adjunct of the postal service. It is to be observed further that reasons quite as cogent and widely distributed, if not as numerous, are adduced why postal depositories are a proper and necessary thing, if not a thing so easy; and quite as significant, to my thinking, as either of these inferences is the fact that almost all the postmasters oppose 1-cent postage until one, and perhaps two, of these great reforms are already accomplished.

All heartily
supported.

The frank and cordial opinions of my valued friends who criticised the report seem to me undoubted evidence that the post-offices are in touch with the Department; and, not only from the deductions above mentioned, but from the scores of valuable suggestions in matters large and small affecting the routine business of the Department, do I take rare pleasure in observing the quickened interest which is taken in the service by postal experts and people alike. If it has not resulted in a great improvement up to the present time, as I can not modestly hold that it has, it can not fail to be of great benefit as its full effect is felt.

SUPERVISION BY DISTRICTS.

As long ago as May, 1890, I had the honor to say to the House Committee on the Post-Office and Post-Roads that if I could begin but one reform in the service I should ask

the permission of Congress to divide the country into districts and appoint as supervisor in each the best postal expert, who should make it his business, not to inspect the routes and post-offices merely to correct irregularities that had happened, but to exchange suggestions with all the employés of the service and so prevent irregularities.

Conferences
with postal ex-
perts required.

Postmasters
need them.

The supervisors, as I maintained, in addition to preventing hundreds of errors on the part of well-intentioned but naturally indifferent postmasters, clerks, contractors, etc., would offer hundreds of suggestions of value for investigation and adoption by the officers of the Department; and, so far from causing outlay, they would in time be a positive source of income by reason of the thousands of dollars of useless expenditure that they would cut off, and the thousands of dollars worth of increased business which they would be the means of causing. This proposition to divide the country into postal districts and appoint supervisors was not received with favor. I then tried if an addition to the inspector force, which could be utilized largely for the same purposes, might not be granted. But the appropriation was not allowed; and the second resort had to be abandoned.

Postmasters
need them.

In the letters which I have been so glad to receive from observing and original postmasters have appeared many unanswerable reasons why a direct system of supervision by districts would be of inestimable value to the service. The new appointee (who bids fair to be appointed for many years yet, according to the custom of all parties and the law of political precedents) is more likely to depend upon tradition for the conduct of his office than upon a study of the law and regulations. Men are appointed from all vocations (properly enough, as I think, because the adaptability and inquisitiveness of the average American is equal to all emergencies); but for the first few weeks he is necessarily a novice. He wants somebody, not to find fault with him and discourage him, but to help interpret the regulations for him.

Inspectors too
busy with rou-
tine.

This is the truer, because it is a very rare case where the ambitious new officeholder does not honestly seek the approval of his patrons, which comes only from an improved administration of his office; and the postmaster who has held office all his life can hardly be expected to match the necessary success of the neighboring business man, for he, if his methods are antiquated, must surely give way to his creative and bustling competitor. The postmaster holds on often for a generation, and if added interest and the responsibili-

ties of new work do not come to him, as I should like to have them go, he surely needs the inspiriting touch of another and perhaps a more enthusiastic brain, if not a more capable one. The inspection service has been so cramped that many postmasters have reported to me that they have not seen the visiting special agent for many years. But it is not the spasmodic inspection that is desired; it is the regular touch and oversight, the inspiration of a thoroughly enthusiastic and successful postal expert, on the capacity of the smaller postmaster, who is capable of doing much better if he only sees the way to do it.

Of the 77 postmasters who wrote me upon this topic 75 favored some sort of postal supervision like this. They recorded many efforts of their own in this direction. Some had frequently been members of conferences of postmasters, and some had even tried to form postmasters' associations for the interchange of ideas and experiences.

One pointed out that he was continually answering questions from neighboring postmasters and even visited them by request to help them out, and another suggested that the postal supervisor would be the officer whom these inquiring postmasters would feel free to write to, and that the bureaus of the Department would in the end find themselves relieved of a great deal of unnecessary routine business. One declared that a great many fourth-class offices could be discontinued because some of the postmasters secured appointments merely for the privilege of sending their own mail free, and another insisted that many star routes were in operation where no one but the postmaster is benefited and where the entire receipts would not pay the horse feed of the carrier.

Reasons pointed out by postmasters.

The supervisor, being a postal expert appointed for postal purposes alone, could not be opposed on political grounds. He would help the smaller postmasters, no matter how capable they themselves might be, because he would enable them the more quickly to become skilled. He would supplement in ways only possible by personal contact the efforts which the Department is continually making to instruct its officials and employes in their duties by means of circulars. The postal system is very much like a patch work, to which piece after piece has been added under circumstances that sometimes justified the act and sometimes did not. Where an influential person could have an office established or a star route put on, one neighborhood would secure double service, while other neighborhoods, without influential ad-

vocacy, were left unsupplied. This inequality exists in a thousand places.

Supervision
would relieve
Congressmen.

What is wanted is an intelligent study of the postal service as a unit. The members of Congress do the best they can, with their many other duties, to look after their own districts. The man with the most time and the greatest pertinacity urges his claims most successfully, while some other equally needy district, represented by another man with less time, gets nothing. Congressmen plead and postmasters sometimes plead; and the Department, quite willing to act, is thoroughly perplexed, being without an agent who looks at the subject from a postal standpoint and with relation to other existing service. In some instances allowances are made for clerks who simply do the work which the postmaster is paid to do while he attends to his personal business, and in other cases postmasters work twelve hours a day and pay a part of their personal salaries to clerks.

The supervisors should not be charged with the duties of inspectors; but if it is deemed best to constitute them a branch of the inspection division, it will be better than nothing. A division of forty supervisors, to be appointed by the Postmaster-General, one out of each district, would mean the promotion of the best postal experts. No other man in the service of the entire district would earn so much money for the Department.

COUNTY SEAT VISITATIONS.

Conference and
supervision after
all.

It occurred to me after a good deal of thought (and as I admit much surprise, that so many popular arguments that the postal service ought to be run on business principles and is not expected to be self-sustaining were not really serious) that the interest of the postmasters themselves might be relied upon to yield good results in the direction of supervision. There was, to be sure, no money to pay them for any services it was proposed to ask for; but I had had such frequent unsolicited evidences of their enthusiastic support that this objection did not seem material. The authority of the official not specially deputed to do certain things might be questioned, but I depended, on the other hand, upon the adaptability and good temper of the visitor and the visited alike. The following personally signed credential of the Postmaster-General were therefore finally sent to each of the 2,807 county-seat postmasters in the United States:

OFFICE OF THE POSTMASTER-GENERAL,
Washington, D. C., August 15, 1891.

To the Postmaster at ———,
County seat of ——— County,
State of ———:

DEAR SIR: The great desire I have to improve the postal service leads me to ask your assistance in a plan to acquaint the Department with the condition of each post-office in the United States. I am asking the postmaster of each county seat to visit each post-office within the county in which he lives to gather the information indicated by the questions inclosed. If, for the sake of the service generally and the good of the offices of your county particularly, you can help me I shall be much gratified.

Credentials to
postmasters

Of course it will be best if you can make these visits personally, but if not, your assistant can represent you, and that neither of you may be absent for any length of time continuously, I will not expect a report earlier than 15th of October, though I would like it as soon as possible. If for any reason you can not perform this service, will you promptly give me suggestions how to get it done.

I must explain to you that the Department has no means at its disposal to meet any expense, and that your work must be your voluntary aid for the good of the postal service, and it will be so recorded in this Department. As at present organized, without this help from you the Department can not make any general examination of the business of the offices, because the inspection division is fully occupied with cases of depredations, frauds on the Government and the public, insufficient sureties, missing mail matter, lottery cases, etc. I am persuaded that great good must follow proper efforts to encourage and instruct postmasters by interchange of experiences and opportunities to acquaint the Department with the wants of each locality. I would rather assist postmasters by informing them of postal laws and regulations than censure them for neglect or failure.

Voluntary
work asked for.

I propose to give to each post-office a standing on the records of the Department according to the marking you put on the accompanying paper. There will be five grades of offices: Perfect, excellent, good, fair, poor; and at the end of each fiscal year the Postmaster-General will report to the President those who rate the highest for such honorable mention as he may see fit personally to make.

If we can all become better officials the country will quickly feel the effect of the improved service. However much we have done, there are none who can not do still better. It is my purpose to find out and help each man who wants his town or neighborhood to have better postal facilities.

Very truly yours,

JNO. WANAMAKER,
Postmaster-General.

In regard to the post-office at ———, county of ———, State of ———.

1. Is the post-office located conveniently for the people? If a map of the town, with location marked, or a picture of the building can be conveniently obtained, it will be useful to the Department.

2. Is it within the 80-rod limit; if not, why could it not be so located?

3. Is the post-office well arranged, clean, and orderly?

4. Are the books, accounts, and reports kept properly and promptly written up?

Inquiries to be
made.

REPORT OF THE POSTMASTER-GENERAL.

5. Is the office used as a place for lounging?
 6. State the time when the mails are received and dispatched.
 7. Is notice of the lottery law posted where the public may see it?
 8. Do the patrons of the office generally regard the post-office as efficiently conducted?
 9. Does the postmaster study and understand the postal laws and regulations and realize the responsibility and dignity of being an officer of the United States?
 10. State how much time the postmaster gives personally to the duties of the office; and if the work is done by proxy, who does it, and at what pay.
 11. If the postmaster has any other business or office, state it.
 12. What improvements in the postal service for this locality have occurred since the present postmaster was appointed?
 13. State the names of and distances from your office to the four nearest post-offices.
 14. How can the service be improved, and what is the chief obstacle in the way of improvement?
 15. At what distance from your office is the nearest telegraph office?
 16. At what distance from your office is the nearest savings bank?
- What marking will you give the postmaster on the following basis: 1 means poor, 2 means fair, 3 means good, 4 means excellent, 5 means perfect.

The elements to enter into the rating are the following: Convenience of location of the office, cleanliness, order, keeping of the accounts, personal attention of the postmaster, improvements in the service made during the last year, growth of the business in the past twelve months

OFFICE OF THE POSTMASTER-GENERAL,
Washington, D. C., August 15, 1891.

To all postmasters in the county of _____,
State of _____.

In the general plan of visitation to the post-offices of the United States, the postmaster at your county seat visits your office, in connection with all others in your county, to gather, with your assistance, information in regard to the postal service in your locality.

This visit is for general inquiry and suggestion only, and is in no sense an inspection. The Postmaster-General believes all of the officials of the Post-Office Department will welcome closer connection with the Executive Department in Washington, and that they will enter heartily into every measure to elevate and improve the service.

As this call, at the request of the Department, is a voluntary service on the part of the gentleman presenting this letter of introduction, I commend him to your courtesy and prompt attention, that no more time may be occupied than is absolutely necessary in getting answers to the questions which he is expected to ask in my behalf.

Yours very truly,

JNO. WANAMAKER,
Postmaster-General.

The results gratified me. With comparatively few exceptions the postmasters were quick to realize the benefits which would accrue to the postal service of their locality by

these systematic visits, and were so patriotic as to be entirely willing cheerfully to do the work. They not only did it, but in doing it exercised so much good judgment that the results are very valuable. They reported almost without exception that they were courteously met and welcomed in the spirit in which they made the visit. Several furnished valuable maps of their districts, many transmitted photographs of the offices, and from almost all the reports there was something to be learned, digested, and acted upon for the improvement of the service.

Coöperation of
visitors and vis-
ited.

There are 2,807 counties in the United States, containing nearly 65,000 post-offices. Reports have been received up to to-day from 2,142 counties, covering 45,600 offices. These include several hundred reports obtained by inspectors from the post-offices at county seats. The following are the leading items obtained by an actual compilation of over 38,000 of these reports:

What 45,600 re-
ports show.

Post-offices conveniently located	36,930
Post-offices inconveniently located	607
Change of location suggested	162
Post-offices well kept, clean, and orderly	34,718
Post-offices not well kept, etc	3,126
Books, accounts, and reports properly and promptly written up	31,107
Books, etc., not properly and promptly written up	6,281
Post-office a lounging place	1,250
Post-office not a lounging place	35,691
Offices having one or more mails arriving and departing every day (that is, supplied with daily mail service)	29,909
Notice of the lottery law was found posted	32,677
Lottery law was not posted	4,963
Patrons of the post-office satisfied with the service	36,267
Patrons of the post-office not satisfied with the service	1,066
Postmaster was found to understand the Postal Laws and Regulations	32,573
Postmaster did not understand the Postal Laws and Regulations	4,814
Postmaster devotes all his time to the office	22,070
Postmaster does not devote all his time to the office	15,420
Postmaster was found to be engaged in objectionable employment in connection with the post-office	166
Postmaster has made obvious improvements in the service of his office	9,801
Postmaster has not thus far made improvements in service of his office	23,997
Offices which could be discontinued and supplied from some other office	409
Number of offices rated 5, or perfect	1,754
Number of offices rated 4, or excellent	8,495
Number of offices rated 3, or good	14,797
Number of offices rated 2, or fair	8,508
Number of offices rated 1, or poor	1,919

Where the tele-
graph and sav-
ings banks are.

Two of the most interesting items which every county-seat postmaster was asked to report upon were the distance from the post-office to the nearest telegraph office, and the distance to the nearest savings bank. These distances, reported in various terms of feet, blocks, rods, yards, and miles, have been reduced to a common term and averages struck of the various parts of the country, with the following results:

New England States.—Average distance to the nearest telegraph office, 4 miles; average distance to the nearest savings bank, 10 miles.

Middle States.—Average distance to the nearest telegraph office, 3 miles; average distance to the nearest savings bank, 25 miles.

Southern States.—Average distance to the nearest telegraph office, 9 miles; average distance to the nearest savings bank, 33 miles.

Western States.—Average distance to the nearest telegraph office, 7 miles; average distance to the nearest savings bank, 26 miles.

Pacific Slope States.—Average distance to the nearest telegraph office, 13 miles; average distance to the nearest savings bank, 52 miles.

Labor and
money freely ex-
pended.

I had hoped to give, as evidence of the zeal and hearty coöperation of the postmasters in this plan of general visitation, figures showing the amount of time occupied by them in making the visits, the number of miles they were obliged to travel, and the amount of money necessarily spent by them from their own purses; but as a general thing this information was modestly withheld, and I am therefore unable to make any such statement.

Reforms neces-
sary.

Each county-seat postmaster was furthermore asked how the service might be improved, and what is the chief obstacle in the way of improvements. Replies upon these points have been briefed, and the following outlines in a few words those things most frequently suggested. An extension of the free delivery system, new boxes in post-offices, better connections, larger offices, more frequent service, an extension of the money-order system, more railroad service, extension of star routes, greater care on the part of postmasters, establishment of postal savings banks, and the postal telegraph.

Suggestions
all carefully con-
sidered.

Usually the reports from county seat postmasters were accompanied by separate letters, suggesting things that ought to be done. These have been immediately acted upon by the officers of the Department.

I shall beg to renew my recommendation for supervisors at the present session. If Congress does not care to permit this innovation, which experience has proved to be wise, I shall have the pleasure and the honor to ask the county seat postmasters again to do this work for me, confidently, because of their enthusiastic loyalty which I have already been made aware of; and with similar confidence I shall count upon the coöperation of the fourth-class officers.

THE UNION OF THE TELEGRAPH AND TELEPHONE WITH
THE POSTAL SYSTEM.

The Federal Constitution declares that Congress shall have power to establish post-offices and post-roads. (Const. U. S., Art. 1, Sec. 8.) The general interpretation of this has been that it not only confers the power, but makes it a duty, to establish a suitable and efficient postal service throughout the country, and while it holds a monopoly of the postal service it is bound to adopt all the means that invention and experience have discovered to transmit intelligence between the people. The Hon. Walter Clark, associate justice of the supreme court of North Carolina, in an admirable paper addressed to me some time ago on this subject, to which I am indebted for several suggestions or quotations that follow, says in substance that nothing in this clause of the Constitution restricts Congress to the use of particular methods.

The Federal
Constitution and
the post.

The framers of the Constitution, when they instituted the postal service, probably never dreamed of postage stamps, registered letters, free delivery, railway post-office cars, canceling machines, and the modern conveniences in use to-day to dispatch the mails. All details were left to succeeding generations to work out according to the needs of the times. Who could suppose that mails in this age might go entirely upon horseback or by coach, as they did one hundred years ago? The man who attempted to manage a large business to-day by the old methods would be bankrupt in a short time. Sir Rowland Hill proved in England that cheaper and uniform postage was feasible. Thereafter similar measures were approved by Congress for this country. Steam came into use as a motive power, and Congress quickly ordered it to be employed as an agency of the postal service. Every other improvement that appears is favorably considered and applied if practical to the postal work.

Undreamed of
developments of
the service.

The one potent agency and the only one that remains beyond our reach is electricity. Its practical value has been known for half a century, but the Department stands in relation to it where it stood 50 years ago. The business of the entire world is to-day so dependent upon electricity that its withdrawal would seriously affect almost every interest that exists; yet the chief servant of all the people, the post-office, which by its equipment is able to make the largest and most beneficent use of it, is so limited in

Only electric-
ity is out of reach.

NOTE.—In discussing the postal telegraph and the postal telephone I have been greatly indebted to Associate Justice Walter Clark, of the supreme court of North Carolina, for many valuable suggestions which I have incorporated in a number of instances in this article.

its authority that it can only adopt the slower methods, and a man out of money in San Francisco must stop 6 days and pay \$10 board while he waits on the mail to bring a \$20 money order from New York. The reason is known to all men.

To say that Congress has refused to sanction its use in the postal service because such an act would be unconstitutional is not true. From many pages of legal authorities the contrary appears. The clause of the Constitution is understood to be mandatory upon the National Government to provide a postal service, since in the face of that provision neither of the States, corporations, or private companies may do so. Therefore, it might be more truly said that it is unconstitutional for the Government *not* to adopt, in the fulfillment of its duty to the people, the best modes of transmitting correspondence that appear in each age.

Post, telegraph,
telephone ought
to be one.

The first telegraph was operated by the Post-Office Department, and it was an evil hour for the people when, against the protest of the Postmaster-General, it was surrendered. I want to see the two great servants for the people, the post-office and the telegraph, reunited and the telephone brought in to enhance the value of the combination. Public interests, private needs, and the popular will call for these agencies to perfect the great postal system of this country. The longer their employment is delayed the greater the aggravation and injustice to the people and the costlier it will be to secure them. Sixty-four million of people are taxing themselves to-day to the amount of \$70,000,000 annually to maintain the post-office plant, and are denied the right to vitalize this magnificent machinery with the mightiest force which science has given to render that machinery most effective.

Other countries
wiser.

It is a surprise to other great nations that America should lag behind in a form of enterprise that is no longer an experiment, and a cause of remark that the people do not rise up to demand cheaper telegraphy, through the convenience and economies of the Post-Office Department. Great Britain and Ireland enjoy a rate, uniform like postage, of sixpence for twelve words to any distance. Germany has about the same rate, and in Austria the rate is lower. In France and Belgium the rate is under ten cents (half a franc) for ten words, between any two points; and at these rates it is said the telegraph is a profitable adjunct to the postal system.

Is it creditable to our statemanship to support the postal system at such large expense and fail to use it at its full capacity when other nations have utilized this agency for

the benefit of the people with such signal success? To ascertain that the people want it one only has to ask the first hundred intelligent men he meets to find an almost unanimous demand for cheaper telegraphy. Every new settlement in our distant Territories, every extension of the boundaries of our growing cities, every increase in the trade and commerce of the country make the telegraph more and more indispensable to the people in cheaper messages of few words for the poor, who sometimes have need for messages of anxious affection or urgent affairs, and in messages at present rates but of twice as many words for the rich, who are conducting business enterprises. For the quick transfer of money from money-order offices it is imperatively necessary.

It is demanded everywhere.

The electric current belongs to the people by right and is bound to become their servant, not of a class nor of one sixty-fourth part of the population, as at present. So soon as the post-office can blend it with its own system, and use its own forces already under pay, telegraphic rates will be reduced. Most adroit opponents of postal telegraph couple with it a like regulation of the railroads, but the Government already employs the railroads as post-roads, and the form in which it is proposed to contract with telegraph companies is precisely the same as that by which we have employed railroads ever since they were built. The business of the railroad is to carry freight and passengers, which is foreign to the purposes of a post-office. This is not true of the telegraph or telephone, both of which by their very nature are limited to the service of cheap and rapid exchange of communication between the people, and this is what the post-office was founded for.

No corporation control.

To propose to include in the problem the transfer to Government ownership of bake shops or breweries or anything else is an attempt to conceal the real issue, unless it can be shown that such agencies are necessary to enable the Government to perform its constitutional functions. Any argument that can justly be made against the union of the telegraph with the post-office applies with equal force against the administration of the post-office itself by the Government.

Constitutional parts of the post.

In the very nature of things, if the post-office work were turned over to-day to any monopoly operated for private profit, there would be hundreds of large sections of the United States deprived of post-office facilities altogether to save the enormous expense now incurred in reaching the remote points. The postage between large cities would be

afforded at present rates, but in all the country districts postage rates would advance, and rise higher and higher according to distance from railroads. Who would choose to go back to the postal system of long ago? Why should we meekly suffer a telegraphic system based on similar principles? Without restating the arguments in my former reports, which I still consider unanswerable, in favor of bringing the telegraph and post-office together, I reaffirm them all with increased emphasis, and upon the same lines, and add, further, my belief that the time has come to join to the post-office the use of the telephone.

A possible telephone syndicate.

A year from next March the telephone patent expires, and unless Congress acts promptly to authorize its adoption for communication among the people, it requires no stretch of the imagination to believe that in the next two years one immense syndicate will unite and control all the hundreds of telephone plants of the country as the telegraph is now controlled, or the two will be united, and then for the next twenty years the most astute attorneys will be legitimately earning large salaries in indignantly opposing the so-called attacks of future postmasters-general upon defenseless vested rights.

Benefits of the postal telephone.

One-cent letter postage, three-cent telephone messages, and ten-cent telegraph messages are all near possibilities under an enlightened and compact postal system, using the newest telegraphic inventions. The advantages of tying the rural post-office by a telephone wire requiring no operator to the railroad station must be obvious. The benefits arising from telephonic connections with the post-offices will easily suggest themselves in a hundred ways to those who want the entire people to share in common privileges. The rural population would be the greatest gainer. A telephone message from the post-office to the railroad station miles away to ascertain if expected freight had come would save the farmer many a needless wagon trip over bad roads; news of approaching frosts could be promptly spread over country districts and fruit-growing regions, and many a valuable crop saved.

The day's market prices for cattle and grain and wool and produce may be obtained by the farmers direct by inquiry from others than the buyer who drives up to the farm in his buggy. All these may seem homely purposes to dwellers in cities, but country life would lose some of its drawbacks by the extension of such facilities to those who bear their full share of the burdens of the Government, and receive, in postal respects at least, less than their share of its benefits.

It is not chimerical to expect a 3-cent telephone rate; the possibilities of cheapening the management of these new facilities are very great. All account keeping could be abolished by use of stamps or "nickel-in-the-slot" attachments. Collection boxes everywhere in the cities, and many places in the country towns, would receive telephone and telegraph messages written on stamped cards like postal cards. Old soldiers and others could find employment as collectors, and frequent collections would abolish the present expensive messenger-boy system, that adds 2 cents to the cost of 90 per cent of city telegrams. In New York City there are thirty-three collections from letter-boxes every day, and at certain hours in the most thickly settled business part of the city the letter boxes are emptied every ten or fifteen minutes.

A 3-cent telephone rate.

The delivery by letter-carriers held to strict account would also be an improvement over the present system of messengers, who rarely hurry except in pictures. Who has not lost a train or missed meeting a friend by a message that started in ample time being delayed in delivery? The system recommended would not forbid private telephones or telephone exchanges in cities any more than it would exclude the use of the telegraph by railroads having their own lines. The plan contemplates only the convenience of the people in the use in common of their own post-office as the neighborhood station for telephoning and telegraphing. They have a right to claim this, as not a penny of additional expense is necessary for rents, heat, light, or attendants for telephonic service.

Combination of the systems.

For telegraphing only an operator is needed when business justifies it, otherwise a telegraph message would be forwarded by phone to the nearest telegraph station.

No one will doubt, in the light of the events of the day, the wisdom of the Government exercising some authority over the transatlantic cables, whose right to land on our shores is only by Government consent. There are also many who question the safety of submitting to any private corporation of capitalists the subjects of reciprocity, arbitration, movements of naval vessels, etc., in messages passing to foreign governments from time to time, as well as messages of citizens affecting great financial and commercial operations, especially when the same corporation is a large seller of news to the Associated Press.

THE POST AND TELEGRAPH COMPARED.

The population of Great Britain is 38,000,000, of the United States 62,000,000, or about 63 per cent greater. The number

of letters, parcels, etc., passing through the post-office in England during the year ending 31st of March, 1891, was 2,623,987,000; through the post-office of the United States for the year ending 30th of June, 1891, 4,351,844,845. In England the proportion per capita was 69; in America it was per capita 70. The number of telegrams the same year in Great Britain was 66,400,000, or nearly two for each inhabitant; in America, 59,148,000, not one for each inhabitant; about one-half the number in proportion to population. Prior to 1870 the telegraph in England was owned and controlled by private corporations, and then only about six millions of telegrams were transmitted, or one to every five of the population.

The growth of the telegraph services compared.

In America, in 1870, 10,646,000 telegrams were transmitted, or about one to every four of the population. Under the corporate system fewer telegrams were sent in England than in America, but after the union of the telegraph with the postal service the number rapidly increased, and now nearly twice as many are sent in England than in America in proportion to population. In the year 1884-'85, 33,278,000 telegrams were transmitted in Great Britain; in the year 1890-'91 66,400,000, an increase of 100 per cent in six years. In America, in 1885, 42,096,000 telegrams were transmitted; in 1891, 59,148,000, an increase of only 40 per cent. Now, contrast the business of the post-office of the two countries during the same time. The increase in the number of letters and pieces transmitted in our post-office was 1,718,728,895, or 65 per cent; in Great Britain the increase was 616,310,383, or 31 per cent.

The growth of the telegraphic business in America is much less rapid than the postal service, or the railroad or steamships, or any other large public business. The reason is evident, for the telegraph is the only public business carried on by private parties without competition, unless the telephone should be considered public business. There is more need of the telegraph in America than in England, as our population is more widely dispersed, and its value depends on the time gained over the mail. In England it is reckoned by minutes, but the rates are so low that its use is general, and it is rapidly increasing. In America the time saved is counted by hours and days, but the rates are so high that it is used mainly by speculators. The growth of the telegraph is much less rapid than in England.

What telegrams cost.

The average distance that telegrams are transmitted is about 300 miles, and the average rate is over 30 cents, and for like distances is considerably higher in America than

in England. In 1884-'85 33,278,000 telegrams were sent in England at a cost to the Department of £1,820,000, or 26 cents per message. The present year 66,400,000 telegrams were sent at a cost to the Department of £2,355,000, or 17 cents per message; that is to say it only cost 30 per cent more to send 100 per cent more telegrams. The total revenue collected in 1884-'85 was £2,042,000, showing an average rate of 25.4 cents per message. In 1891 the total revenue collected was £2,812,000, showing an average rate of 20 cents per message; a reduction in the cost per message of 9 cents, or 34 per cent, and a reduction in the receipts or rate per message of 5 cents, or 20 per cent. It should be said that the average message was shorter in 1891 than in 1885.

In America, in 1884, the receipts were \$19,632,000, the average rate of toll $36\frac{1}{2}$ cents per message. The expenses were \$13,022,000; the average cost to the company was 25.2 cents per message. In 1887 the average rate of toll per message was 30.4 cents, a reduction in the rate of 17 per cent over 1884. The average cost per message was 23 cents. In 1891 the rate was $32\frac{1}{2}$ cents and the average cost per message 23.2 cents, showing in 4 years an increase of 2.1 cents, or about 7 per cent in the average rate, and an increase of less than 1 per cent in the average cost per message to the company. From these statements it appears that governmental management in England has been more economical and more beneficial to the people than the corporate management in America.

The transfer of the system from the corporations to the postal service would, we believe, show even more favorable results in America. Large reduction of the rates must increase the business in America as in England without corresponding increase in the expense. It is sometimes said that corporate management in America is more economical than Government management, and that therefore we could not expect like results with those obtained in England. Let us compare the postal department in America with the telegraph here and with the postal service in Great Britain.

In 1885 the number of mail packages sent in our post-office was 2,633,115,950 at an average cost of 1.9 cents; the receipts were \$42,560,843.83 and the deficiency was \$7,041,344.58. The present year the number of packages transmitted was 4,351,841,845, at an average cost of less than 1.7 cents; the receipts were \$65,065,293.87, and the deficiency was \$6,160,205. In 1885 in England there were 2,007,677,573 pieces transmitted by mail at a total cost of £5,317,000, or 1.1 cents per package. In 1891 2,623,987,956 packages were trans-

Reductions possible.

Post-office more economical-ly managed than telegraph.

mitted at a total cost of £6,687,000, or 1.2 cents per package. If the anticipations of the Department are realized a deficiency of \$7,041,344.58 in 1885, caused by the reduction of letter postage from 3 cents to 2 cents, will be converted into a profit in 1893, the year for which the Department at this time is presenting its estimates. These facts show a small increase in the telegraphic business of America with increased rates to the public and cost to the company; a large increase in the postal business with reduced rates to the public and cost to the Government. That is greater economy in the management of the postal than of the telegraph business.

There are about 64,329 post-offices in this country and 20,098 telegraph offices, a large proportion in railroad stations remote from business centers where the service is performed by railroad officials. The business of the post-office and telegraph depends largely upon the facilities offered to the public. Where there is neither post-office nor telegraph office there will not be any correspondence to speak of. Give the same community proper facilities and a large correspondence will develop. In England the telegraph offices are accessible to the people. In America the average distance to telegraph offices from the post-office is about 7 miles, as proven by recent reliable reports. If each of the 64,329 post-offices transmitted only three telegrams a day it would amount to 70,000,000 a year, or nearly 20 per cent more than are now sent. The larger proportion would be in addition to those now sent, for a new business would be created by the new facilities. Who can doubt that on an average four telegrams would be sent per day from these offices?

Increased use. Over seven times as many messages are sent to-day as were sent twenty-two years ago, and yet the population has not nearly doubled. Many petitions were presented to the last Congress in favor of a postal telegraph, and but very few in opposition. Many newspapers believe that they are dependent upon the Western Union Telegraph Company for news, and naturally oppose the postal-telegraph system, but a larger number of papers of lesser circulation favor the postal-telegraph system. It is emphatically a measure of the people and for the people, and is not and has not and can not be made a party measure.

**Other Post-
masters-General
urged it.**

The union of the two systems has been advocated at different times by Postmasters-General of each of the two great political parties. A bill providing for this union unanimously passed the Senate Committee on Post-Offices and Post-Roads at the last session of Congress, and though

the bill was defeated in the House committee there was no division on party lines.

The rapid transmission of correspondence is a part of the business and proper duty of the Post-Office Department, and it does not fulfill its functions or perform its full duty until it operates the telegraph, the most rapid means of transmission of intelligence. The press is more deeply interested in the union than the people, because it is dependent in large measure for telegraphic news.

The policy of the Post-Office Department is to carry newspapers in some cases free, and in all other cases at much lower rates of postage than is charged for letters, because the one is for the public weal, while the other is for private benefit. If the telegraph becomes part of the postal service it would still be the duty and policy of the Department to transmit telegrams for the press at a much less rate than for private individuals, and it might be possible to go so far as to give the use of certain wires at certain hours of the night to be operated by the Associated Press at a nominal rate, as such use would occasion little expense to the Department, for the wires would be probably idle during portions of the night. At least three-fourths of the telegraphic press correspondence is by night, when only a few of the wires are in use. The same news is generally transmitted by the Associated Press to every part of the country, and local news by local associations to local papers.

The ease with which such news is telegraphed is shown by the last annual report of the postmaster-general of Great Britain. He says:

Under experimental conditions no less than six hundred words per minute have been transmitted over a single wire, while a speed of four hundred words per minute can be evenly and safely used in practical working; a very satisfactory result compared with a rate of sixty to seventy words per minute obtained in 1870.

It appears from this statement that with a comparatively small number of wires the Department could transmit all the news required by the Associated Press and a large part of the telegraphic correspondence between our large cities. It also shows that the British post-office has favored the adoption of new and improved means for the transmission of messages since they now send ten times as many words per minute as they did when they took over the system.

Mr. Craig claims that he has devised a system by which parties can purchase instruments for perforating messages on slips of paper, and that these can be operated as easily as

Belongs to Post-office.

Associated Press could be properly provided for.

Extract from last British report.

writing by typewriter. The message could be sent to the telegraph office and transmitted at the rate of six hundred words per minute. The cost of transmitting such messages would be small. The experience of the English post-office shows that it is feasible, and if carried out would make a revolution in the telegraph system and develop a telegraphic correspondence larger than mail correspondence forty years ago and cheaper than the then letter postage. A system capable of such extension should surely be tried. I therefore respectfully request that authority be given to the Postmaster-General to contract for the lease of wires for the transmission of correspondence by telegraph or telephone and connect post-offices with telegraph and telephone offices, and that an appropriation of \$500,000 be made toward this end; the rates to be charged for such correspondence to be fixed from time to time by the Postmaster-General, subject to the approval of Congress.

THE GOVERNMENT RATES.

I regret to say that the contention of the Western Union Telegraph Company still goes on against the action of the Department fixing the rates for Government telegraphs, notwithstanding their formal acceptance of the provisions of the act of 1866, which obliges the Postmaster-General to fix the rates annually. The case is now before the Court of Claims. Inasmuch as there has been considerable mystification of this matter in the public mind through certain newspapers, I put here a summary of the facts, showing briefly the Department's action:

The Govern-
ment sued.

No order
issued for four
months.

On the 29th of June, 1889, I notified the telegraph companies that the rate for the next year would be 1 mill per word, not, however, making any order or issuing any notice to the executive departments. Letters were received immediately protesting and requesting conference.

On the 3d of July, 1889, I offered opportunity for all parties to be heard, and July 11 was agreed upon for an interview with Dr. Green. He did not appear, but wrote a letter arguing for old rates, which was acknowledged July 13 by the Postmaster-General in a letter stating twice that the question was a "proposed" one, and giving the reasons for a lower rate for Government messages. Further correspondence ensued, in which the Postmaster-General invited conference, and stated willingness "to entertain any reasonable proposition for rates based upon known facts," but no interview with the president of the Western Union took

place until the latter part of August, when I met him incidentally at Saratoga, N. Y., when no agreement was reached.

Subsequently Dr. Green visited the Department and offered, as the only concession, the extension of the 1,000-mile circuit to 1,500 miles. This offer I could not accept, as the largest part of the business of the Departments is within the 1,000-mile circuit. I waited four months, from July 1 to the last of October, to reach some conclusion mutually satisfactory to the Department and the telegraph companies, and, failing in this, was obliged by the requirements of the law and the exigencies of the Government business to issue an order on the 30th of October, 1889, fixing a scale of rates which I arrived at after conference with telegraph experts, taking as a basis partly the rates that had been current with the public before the competition lines were swallowed up, partly the known rates of the large companies, and partly the reductions in cost of service as stated in the Western Union annual reports.

The discrimination against the Government that had existed for eighteen years by charging for every word except date was disallowed, and the rate per word fixed at the old rate, namely, 1 cent a word, but fixing the minimum message at ten words instead of twenty as hitherto, at the same time conceding to the telegraph companies a shorter circuit by making a limit of 400 miles where previously it had been 1,000 miles at same rate. For distances over 1,000 miles, where the least business is done, some of the rates were slightly advanced to equalize the reduced rates upon the shorter circuits.

Payment for
address and sig-
nature abolished.

One cent a
word and circuit
shorter.

The 3-cent-a-word rate for the Weather Bureau reports was reduced to 2½ cents, which is about the ratio of reduction of cost to the Western Union from the time the 3-cent rate was fixed.

Nearly the old
rate.

I quote the closing paragraph of the letter accompanying the order of the Postmaster-General October 30, 1889:

Permit me, also, to add that while there is no necessity or intention to place any burden upon your company, yet I am convinced that the Government is entitled to very special consideration in rates and privileges of telegraphic service; therefore, for the purpose of determining Government rates in the future, I now formally propose what I have already suggested and understood you to be willing to approve, viz: the appointment of a commission of five suitable persons (two by your company, two by this Department, and the fifth by the four so chosen) to inquire and report to this Department and to your company, upon the actual cost and proper value of telegraphic service, their conclusions to embrace a recommendation of equitable rates for the Government telegraph service for the next succeeding fiscal year.

Arbitration
proposed.

This offer to leave to arbitrators the fixing of rates for the next year was not accepted, and the Western Union, by formal action of its board, refused to accept payment of their bills at the rate established by me, and it sued the Government in the Court of Claims, where the case is now pending.

Table of old
and new rates.

I submit below a table showing Government rates since July 1, 1871, and the changes from time to time. I consider the rate now fixed as just and reasonable. The English Government pays nothing for its Government work, and makes a profit annually from its service to the public. This, of course, is based on no interest being paid on the amount invested in telegraphic plant, any more than the United States Government does not count as an expense the interest on the cost of the ships in its Navy. The Western Union claims that each message costs them 23.2 cents, while the English Government sends messages for the public at 12 cents, and shows an annual profit. See their last annual report.

Rates fixed by Postmasters-General on Government messages.

For fiscal year be- ginning—	Rate.	Postmaster- General.	Minimum count.	Maximum rate per word.
July 1—				
1871..	1 cent a word for each 250 miles (or fraction thereof).	Creswell	25 words..	Not limited.
1872..	do	do	do	Do.
1873..	do	do	do	Do.
1874..	do	do	do	Do.
1875..	do	Jewell	do	10 cents.
1876..	do	do	do	Do.
1877..	1 cent a word for each 500 miles (or fraction thereof).	Key	do	Not limited.
1878..	do	do	do	Do.
1879..	do	do	do	Do.
1880..	do	Tyner	do	Do.
1881..	do	James	do	Do.
1882..	do	Howe	do	Do.
1883..	do	Hatton	do	Do.
1884..	1 cent a word for 1,000 miles, or less, and one-fourth cent a word for each 250 miles (or fraction thereof) over 1,000 miles.	Gresham	20 words..	2½ cents.
1885.....	1 cent a word for 1,000 miles or less, and one-tenth cent a word for each 100 miles (or fraction thereof) over 1,000 miles.	Vilas	do	Do.
1886.....	do	do	do	Do.
1887.....	do	do	do	Do.
1888.....	do	Dickinson	do	Do.
1889 } 1890 } 1891 }	1 cent a word for ten body words for not exceeding 400 miles, and one-half cent for each additional word; one and one-half cents a word for ten body words for 400 to 1,000 miles, and three-quarters of a cent for each additional word; for distances over 1,000 miles one-half cent extra per word over and above the price for from 400 to 1,000 miles.	Wanamaker.	10 words	3 cents.

NOTE.—The rate for signal service "circuit" messages has not exceeded 3 cents a word a circuit from July 1, 1872, to June 30, 1889. For the year beginning July 1, 1871, it was not to exceed 2 cents a word a circuit. Since July 1, 1889, it has been 2½ cents a word a circuit. From July 1, 1884, to June 30, 1889, there was a rate on night

Government messages of three-fourths of a cent a word on not less than twenty words, and 1 cent a word on words in excess of twenty words, for 2,000 miles or less; and of 1½ cents a word on not less than twenty words, and 1 cent a word in excess of twenty words, for more than 2,000 miles, on a minimum count of twenty words.

The night rate since July 1, 1889, has been three-quarters of a cent a body word for not exceeding twenty words for all distances, and one-half cent for each additional word.

APPOINTING FOURTH-CLASS POSTMASTERS.

A bill introduced in the last Congress provided briefly for the appointment of fourth-class postmasters as follows: That the country should be divided into postal districts, in each of which the Postmaster-General should appoint a post-office inspector to act as examiner; that when a fourth-class postmaster is to be appointed this examiner shall post notices saying where the post-office is, what compensation the postmaster receives, what bond is required, where application papers may be had, when papers must be returned, and giving such other information as seems proper; that the examiner shall furnish the blank applications, etc., which shall be filled out by the applicant himself, giving his name and residence, when and where naturalized, if naturalized; time and place of birth, education, physical capacity; whether previously employed in the military, naval, or civil service; his employment and residence for the previous five years; whether indicted at any time; and where the applicant would establish the post-office, and whether in connection with any other business; that each candidate shall also furnish a certificate, under oath, signed by three reputable citizens of the State or Territory in which the applicant has actually resided within one year, that the applicant is suitable for the office; that the post-office inspector shall post a list of applicants in the given locality, and shall then find intelligent judgment as to the qualifications of the applicants; that a graded list of applicants shall be sent to the Postmaster-General; that the Postmaster-General shall then appoint to the post-office one of the candidates reported upon as fit, assigning reasons acceptable to the public why the candidate graded highest does not happen to be appointed, if he does not happen to be; that no appointments shall be absolute until a year thereafter; that the Postmaster-General shall not appoint, nor the inspector recommend, any candidate for political reasons, and that they shall prevent as far as possible the presentation of any political information touching the applicants; and, finally, that any fraud knowingly perpetrated shall exclude a candidate from the eligible list and be sufficient cause for his removal during the probationary period.

Provisions of a bill.

I lay this proposition before Congress with one or two suggestions about it. In the first place, it is very much to

Arguments for
and against.

be doubted whether the members of Congress belonging to the dominant party will choose to give up the privilege (which they so commonly confound with their prerogative) of furnishing the Department with desired and welcome information touching the qualifications of candidates; and, while the fact that the consideration of these questions is often the more troublesome the more political the questions are is the principal reason why the matter of appointments is so disagreeable to Congressmen, still it is also the reason why the privilege is attractive; and I fancy that the surrender of this power, which the Executive, first by force of necessity and now by force of custom, willingly surrenders to them, is a long way in the future. Yet the plan is worth consideration.

Inspectors
would be neces-
sary.

The appointment of additional inspectors would be involved, for the work demanded would be tremendous, and could not be performed by the present force. In view of the success of the county-seat visitations the plan of district supervisors may very likely be enacted into law, and the supervisors could do this work. The bill was evidently an expression of the tendency to take appointments out of politics, which means to take them away from the Executive, which means in turn an unconstitutional tendency; and while the effort in the bill above mentioned has evidently been to preserve a show of the President's and the Postmaster-General's prerogative in the control of appointments, subject to the assent of the Senate, the provision that the reasons which prompt the Postmaster-General, and so the President, to expose these reasons for their action to public scrutiny, is by the same reasoning an infringement of the power of appointment.

To improve the
postmaster.

If, therefore, this phase of the plan is unwise on legal grounds, it is also unwise on practical grounds, because the best work of a public servant is done, not for the satisfaction and the credit of the power to which he is not responsible for his appointment, but to the power to which he is responsible; and while it is true that, as the importance of the fourth-class postmaster would increase with the assumption of such new duties as the direction of the free-delivery service, the telegraph office, and the postal depository would give him, still greater care ought always to be exercised, and would be exercised, in his selection, it is also true that the proposition above referred to would be regarded by many as a false step in the direction of permanency in public place holding and public serving.

ABOLISH PERSONAL SURETYSHIPS FOR POSTMASTERS.

The amounts of postmasters' bonds, as a rule, under the present system, are too high and should in all fairness be reduced. Moreover, in these days, when corporation security can be so easily obtained, it is a mistake to take as sureties the bonds of thousands of men and women unknown to the Department, the value and usefulness of which are constantly changing with bankruptcy and death. I believe that the Government should accept only surety companies as bondsmen, and that such bonds should be paid for by the Government and not by the postmaster.

In hundreds of cases the best men can not take appointments because they can not furnish bonds; and the man who receives the place, though rich enough to make or get the bond, is too poor in education, habits, or disposition to attend to all the work of a postmaster. In not a few places the citizens best entitled to be appointed have been prevented from getting bonds for political reasons. In scores and probably hundreds of cases the discipline and good service of a post-office is crippled because the postmaster, to get his bond, has been compelled, as a consideration therefor, to appoint a relative of the guarantor the deputy, or the cashier, or certain clerks, who were not only incompetent, but who assumed independence of the rules of the office. In some cases the bondmaker becomes the banker of the postmaster and uses the Government money.

I am confident that the outlay for the Government to pay for the bonds would be more than balanced by removing these complications and by the better and safer service brought about through the systematic watchfulness of corporations which make it a business to enter security on bonds. The amount of the bonds at Presidential offices at this time is \$35,957,000, and in addition \$35,467,000 for the money-order offices, making a total of \$71,000,000, that could be reduced safely to \$50,000,000, and the bonding be done for probably from \$50,000 to \$100,000 for the term of the postmaster. At the fourth-class offices the bonds are \$35,360,500, and could be safely reduced one-half. As there are few clerks or assistants at fourth-class offices, the necessity is not so great. I may add that the practice to-day is becoming common with banks, insurance and trust companies to refuse private bondsmen, insisting on corporate bondsmen at their own expense. Any man under the private bonds of his friends or relatives is, in spite of himself, more or less under obligations to such bondsmen, and compelled to give consideration to demands upon him that, to say the least, lead to embarrassments and impairments of good service.

Onerous obligations of postmasters.

Amount of bonds.

MONEY-ORDER EXTENSION.

At the close of the fiscal year there were 10,070 money-order offices; an increase of 688 over last year. The number of postal-note offices was 703, or 25 less than last year, some having been discontinued or merged into full money-order offices. Nearly twelve million domestic money orders were issued during the year, and about the same number paid. The value of the orders issued was nearly \$120,000,000, and the payments were nearly the same amount; and out of all this there were but 226 cases of alleged erroneous payment, amounting to \$6,982, which, on being examined, proved the Department to be to blame only to the extent of \$1,627, which amount was paid. The ratio of wrong payment is one to every 140,000.

To cover expenses merely. I recommend a very general extension of the system in localities where offices have never been established. There are 54,259 communities where there are post-offices, but no money-order branches. It was the civil war that caused the establishment of these offices, to enable soldiers to remit money to their families. The same patriotic purpose should cause the Government to extend these advantages to communities now destitute of means to transmit money. Exclusively farming districts call for this accommodation; and while I do not believe that the Government should undertake functions that citizens can provide as well by private organization, this is a service that can not be safely and conveniently afforded in any other way as well, until there is some other agency as widely provided that will be at no other expense than the cost of the printed blanks with which the business is conducted. For the transfer of money and as a measure of safety to travelers who do not care to carry bills money orders payable at the money-order post-offices throughout the country are a great convenience.

Reducing money-order bonds. One of the reasons for the slow growth of the money-order system has been the size of the additional bond required, which some of the postmasters at the smaller offices have been unable to give. To remove this obstacle as far as possible it is proposed to have the book of blank forms contain half the present number of money orders and postal notes, and, for the lessened responsibility, to decrease the bond from \$3,000 to \$1,500.

POST-OFFICES AND APPOINTMENTS.

The total number of post-offices of all classes is 64,329, an increase of 1,928; of this number 2,942 are Presidential,

an increase of 204, and 61,387 are fourth class, an increase of 1,724.

The following table shows the numbers, establishments, discontinuances, and increase during the last twelve years: Figures for twelve years.

Year.	Number.	Estab-lished.	Discon-tinued.	Increase.
1880.....	43,012	3,462	1,328	2,134
1881.....	44,512	2,915	1,415	1,500
1882.....	46,231	3,166	1,447	1,719
1883.....	47,863	3,253	1,621	1,632
1884.....	50,017	3,414	1,260	2,154
1885.....	51,252	2,121	886	1,235
1886.....	53,614	3,482	1,120	2,362
1887.....	55,157	3,043	1,500	1,543
1888.....	57,376	3,864	1,645	2,219
1889.....	58,990	2,770	1,147	1,623
1890.....	62,400	4,426	1,025	3,401
1891.....	64,329	3,420	1,492	1,028

APPOINTMENT DIVISION.

Post-offices established and discontinued, postmasters appointed, and the increase or decrease as compared with the previous year.

Post-offices.	June 30, 1890.	June 30, 1891.	Increase.	Decrease.
Post-offices established during the year.	4,427	3,420	.....	1,007
Post-offices discontinued during the year	1,025	1,492	467	.....
Net increase over previous year	3,402	1,928	.....	1,474
Whole number of post-offices	62,401	64,329	1,928	.....
Number of Presidential	2,738	2,942	204	.....
Number of fourth class	59,663	61,387	1,724	.....

Appointments during the year.

Appointments.	June 30, 1890.	June 30, 1891.	Increase.	Decrease.
On resignations and expiration of term.	8,919	7,570	.....	1,349
On removals*	6,569	*1,429	.....	5,140
On offices becoming Presidential.....	134	241	107	.....
On deaths of postmasters	673	658	.....	15
On establishment of post-offices.....	4,427	3,420	.....	1,007
Total	20,722	13,318	107	7,511

Total appointments during the year 13,318

Total offices discontinued 1,492

Number of names and sites changed..... 1,414

Total cases acted upon 16,224

*Removals—Presidential: 46 served 4 years and over, 19 were removed on inspectors' reports, and 49 for other causes. Fourth class: 561 served 4 years, and 108 were removed on inspectors' reports, and 646 for other causes.

CHANGES OF POSTMASTERS.

Presidential offices:

Resigned	79
Terms expired	286
Deaths	28
Removed after serving four years	46
Removed on inspectors' reports	19
Removed for other causes	49
Total Presidential	507

Fourth-class offices:

Resigned	7,305
Deaths	680
Removed on inspectors' reports	108
Removed for various reasons	1,307

Total fourth class [of these 561 served four years and over] 9,150

Total all classes:

Resigned	7,384
Terms expired	286
Deaths	608
Removed after serving four years	607
Removed on inspectors' reports	127
Removed for other reasons	685
Total changes 1891	9,687
Total changes 1890	16,161

Total appointments at Presidential offices:

Changes	507
Offices becoming Presidential	241
.....	748
Total appointments establishing new offices	3,420
Total appointments, other fourth-class offices	9,150
Total	13,318
Total appointments, all classes, 1891	13,318
Total appointments, all classes, 1890	20,722

MORE TRAINS; BETTER DISTRIBUTIONS.

The quickened service of a year ago, showing such substantial results, has been still further added to in accordance with the urgent demands of the country and under the personal direction of practical officials. Nearly 8,000 miles of additional railway post-office service have been established, 1,300 miles in the Pacific coast States, 3,500 in the other Western States, 2,400 in the Southern States, and about 1,000 in the Northeastern States. Special attention was given to the Pacific States in reorganizing old routes

Distribution of
new train serv-
ice.

to meet the rapidly changing centers of business and population, in strengthening old lines, in establishing new ones, in transferring service from steamboats to railroads, and in maintaining the closest supervision of the whole service on the coast. This action has reduced to a minimum the complaints of irregularities, and has, I hope, at last placed the service on an equality with that of the older States. The same gratifying results have been accomplished in the Southern States, where there is now a third daily railway post-office between New York City, Washington, Richmond, Charlotte, and Atlanta, with through connections to Savannah, Birmingham, Mobile, New Orleans, and Houston. Some idea of the extent of the service in the West may be obtained from the following statement of daily service at four important points:

	Number mail trains—	
	Arriving.	Departing.
At Chicago	145	144
At Cincinnati	70	73
At St. Louis	65	72
At St. Paul	75	74

Much time is saved by an improved system of separation in railway post-offices of city mail for large commercial centers. During the year ended June 30, 1891, 253,766,256 letters for city delivery were thus separated; an increase over the previous year of 28,005,900, or 12½ per cent. This system will be extended as rapidly as possible during the present fiscal year. Not only has the distribution of mail in the larger cities been greatly facilitated, but considerable attention has been given to the development of a better suburban service. Towns and villages within a radius of 30 miles from a large city can not be satisfactorily supplied from the fast-mail trains, there being insufficient time for the separations. Accordingly a special suburban service, by means of local trains, has been tried at Boston, Chicago, St. Paul, and Minneapolis and at other places.

Separations for
city distribu-
tion.

The following statement seems to show a very satisfactory improvement in the amount and the character of the work done by the Railway Mail Service:

For the fiscal year ended June 30, 1890:

Number of pieces distributed.....	7,865,438,101
Number of errors.....	2,812,574

(There being one error for 2,797 correct distributions.)

REPORT OF THE POSTMASTER-GENERAL.

For the fiscal year ended June 30, 1891:

Number of pieces distributed.....	8, 564, 252, 563
Number of errors.....	2, 042, 042
(There being one error for 4,194 correct distributions.)	
Increased number of pieces over that of the preceding year	698, 814, 462

During the same period 14,119 case examinations were made, at which 15,830,849 cards were distributed with an average of 92.39 per cent correct, the highest ever attained. This increased efficiency is the natural result of the educational methods, of the service, the rule that the weak, the intemperate, and the lazy shall go, the merit system of promotion, and the watchfulness of the officials.

Corrected
errors of the pub-
lic.

There were withdrawn from railway post-offices during the year and forwarded to designated post-offices for treatment 7,259,156 pieces of mail imperfectly addressed, under which treatment 2,621,396 pieces were returned to writers, 2,372,767 were corrected and forwarded to addressees, 1,283,014 were sent to the Dead-Letter Office, 492,858 were held for postage, and the remainder, 480,121 pieces of third-class matter, was disposed of as waste. This action kept out of the Dead-Letter Office 4,994,163 pieces of mail matter, a better result by 2,807,170 than is shown in the report for 1890. It is not improper, in the interest of the best service, to state that the number of errors made by the public, as shown by the above statement, exceeds those made by the railway post-offices by 5,217,107.

At the close of the last year 1,078 railway post-office lines were in operation, covering a mileage of 140,736, and leaving less than 19,000 miles of railroad mail routes in the entire country without the railway post-office service. The following statement is not less striking:

Number of clerks in the Railway Mail Service.....	6, 032
Increase	196
Number of miles traveled by clerks during the year....	141, 194, 221
Separate pieces of mail matter treated.....	8, 564, 252, 563
Number of registered packages and cases.....	16, 671, 914
Number of registered pouches and sacks.....	1, 210, 539

Two new
classes wanted.

I beg to mention now the necessity of making early provision for the growth of the Railway Mail Service by such changes in its organization as shall admit of the establishment of two additional classes for its clerks. Ten years have passed since the present form of organization was authorized, within which time there has been an increase in railway mileage of 60 per cent, an increase in annual postal-clerk mileage of 86 per cent, an increase in clerks of the

service of 69 per cent, and an increase in pieces of mail handled of 148 per cent.

DANGERS OF THE RAILWAY MAIL.

The casualties in the Railway Mail Service during the past year have been greater than usual. The total number of railway post-office car wrecks was 319. In these there were killed 13 clerks; severely injured, 68; and slightly injured, 84. Each year's casualties bring to mind more and more forcibly the necessity that exists for some provision by Congress for the families and dependents of the men whose lives are lost while in the actual performance of their duties. It is true there is an aversion to a civil pension roll in this country; but it becomes a question worthy of consideration whether it would not be possible, with the terrible record of the past year before us, to devise a method that would not be objectionable or burdensome.

Railroad casualties last year.

But it is not alone to the families of those killed in the service that consideration should be given. With the growth of the service comes the increased demands upon the force of clerks, and each year the number incapacitated for the hard work on the heavy lines is becoming greater and greater, and the pressure of friends that they be provided for on routes of less importance becomes stronger and stronger; the acquiescence in which, however, must act as a check to the fullest development of the service, because the lines of small importance act as feeders for the arterial railway post-office system, and it is upon the light lines that the new clerks should receive their training in the rudiments of mail distribution. Filling up the lighter lines with the disabled or the infirm takes away from the management of the service an essential source from which to provide for the speedy and accurate manipulation of the mails. It has been suggested that provision be made for superannuated clerks by retirement on part pay, a fund for the purpose to be created by a percentage contribution both by the active and the superannuated clerk. The fact is undisputed that railway postal clerks incur great risks, and when they are worn out and unfitted for longer road duty it is a great hardship to turn them off altogether, and to provide easy places for them by transfer to the lighter lines is really a system of pensioning that will operate each year more and more detrimentally to the service and add largely to the cost of the Railway Mail.

All good men required.

The speed of railway mail trains is becoming more rapid each year, and additional precautions have been taken by

Speed of rail-
road trains.

the Department in guarding the construction and maintenance of railway post-office cars so as to render them as nearly complete as possible, and, by the combination of great strength with all modern safety appliances, to prevent the loss of life and limb. Hereafter the system of inspecting by the Department will be regularly enforced; and whenever the equipment falls below the standard set up by the Government (which will accord with that indorsed by the principal trunk-line master car builders), it will be ordered withdrawn from the service. In like manner compensation for new post-office car equipment will not be authorized until it conforms to the standard of the Department. This method will reduce the risks to a minimum. It may be mentioned that to accomplish a mail train schedule of 1,000 miles in twenty-five hours it is necessary to make an average run of 40 miles an hour; and in maintaining this average there are many parts of the route on which it reaches for continuous stretches 60 or 70 miles per hour. This high rate prevails on several of the East and West trunk lines. In no other country does the speed of the mail service for long distances traveled by railway post-offices approach that of this country.

TRANSPORTATION ROUTES.

On June 30, 1891, the inland mail transportation, including star, special, mail-messenger, steamboat, and railroad service, amounted to:

Number of routes.....	28,253
Increase	1,147
Length of routes in miles.....	439,027
Increase	11,066
Number of miles traveled per annum	346,266,445
Increase	18,856,452

STAR SERVICE.

Number of routes	16,410
Increase	523
Length of routes in miles.....	237,846
Average number of miles traveled per annum for years 1881-1890	83,472,684
Number of miles traveled in 1891	99,687,954

SPECIAL SERVICE.

Number of routes.....	363
Length in miles	6,762
Number of miles traveled per annum	908,191

MAIL-MESSENGER SERVICE.

Increase in number of routes	204
Increase in annual mileage.....	423, 141

STEAMBOAT SERVICE.

Decreased number of routes.....	5
Decreased mileage	5, 635

RAILROAD SERVICE.

Number of routes.....	2, 261
Increase	62
Length of routes in miles	159, 518
Increase	4, 739
Number of miles traveled per annum.....	228, 719, 900
Increase	13, 004, 220

The disuse of the steamboat service is due to the superior facilities offered by new lines of railroad. An important steamboat service has been established from Stika, Alaska, westward to Unalaska, a distance of 1,250 miles, making it possible to reach all the coast settlements of the Alaskan Peninsula and the Fox and Aleutian islands. The ocean mail service with Alaska now covers a distance of 2,300 miles. An extension farther north from Unalaska for a distance of 800 miles is proposed for 1892, taking in St. Michael and the Yukon River country, and bringing the mail service of the entire Territory fairly within the reach of civilization.

The Alaska
service.

NO RAILROAD BONUS NEEDED.

In 1879, when railroad facilities were few and train service slow, Congress appropriated \$295,000 in extra allowances for such railroad companies as could not afford to make schedules sufficiently numerous or fast. These sums were to be in addition to the payments of ordinary rates for railroad transportation. The quantity of mail matter was then perhaps one-half of what it is now, so that each of the companies by the natural growth of mail transportation has, since 1879, doubled its revenue from mail pay. At each weighing, moreover, there is a further increase of pay according to the increase of service. In view of this fact, and because abundant facilities were to be had without granting extra pay, and because of the frequent charge by railroad companies giving similar service without extra pay that the Department was discriminating against them, I have concluded henceforth to remove the embarrassments, so far as lies in my power, by not including in the budget for the

How "special
facility" pay
originated.

next year any estimate for special facilities. This course, if approved, places all the transportation companies on exactly the same basis of pay.

THE TUBULAR POST.

I desire again to draw the attention of Congress most earnestly to the problem of mail transmission in cities by pneumatic tubes. I have been trying for two years to secure definite propositions from inventors and capitalists, which should form the basis of a definite proposition, to be laid before the Post-Office Committee to see if the requisite appropriation could be obtained, for experiment at least. I believe more than ever in the efficiency of the tubular post, both as a tremendous business convenience in large cities, and as a self-supporting and perhaps a profitable investment; and this year I have had collected, and beg to lay before you in an appendix to this report, facts about the tubular systems of Europe.

The tubular
post of Berlin.

The first establishment of the tubular post in Berlin cost \$295,000, and the present cost of the entire plant, which embraces 38 tubular post-offices and covers 47,929 meters (37.92 miles) of tubing, is about \$714,000. The investment has been found to be profitable, and it has paid better and better from year to year. A significant fact about it, too, is that the new facilities have seemed to create new traffic; and so far from interfering with the telegraph business, as was at first expected, it has caused this greatly to increase. In 1877, the first year of the tubular post in Berlin, the city telegrams numbered about 57,000, and in 1878 this number fell, to be sure, to about 43,000; but in 1887 the number transmitted was over 97,000, or 32 per cent more than in 1886. Nor has the introduction of the telephone had any different effect; for it appears by actual figures that the public use of all these methods of transmitting intelligence has been increased. In 1882, when the telephone was first introduced into the city, the number of tubular letters and post cards transmitted was 614,000. In 1887 this number had risen to 934,000, or an increase of 52 per cent. A noticeable thing, however, has been the decreased use of the tubular post in the Berlin postal district; for, while the number of tubular messages sent to and from the suburbs was 8,700 in 1882 and 26,800 in 1885, it fell in 1886, the year after the introduction of the telephone, to 2,700; and as these figures have been practically maintained, the inference is fair that the decreased use of the tubular post to and from the suburbs is due to the extension and improve-

ment of the telephone service. The saving of time in the transmission of messages by pneumatic tubes in Berlin has been found, for urgent letters, to be 30 or 40 minutes, or, to distant points, almost an hour. The price for tubular letters is the equivalent of $7\frac{1}{2}$ cents, and for tubular post cards the equivalent of $6\frac{1}{4}$ cents.

The tubular systems of England have proved no less satisfactory. In 1886, in London, were 94 tubes, which covered 34 miles, and transmitted 32,000 messages daily. In Liverpool were 14 tubes, covering 5 miles, and transmitting 10,000 messages daily. In five other provincial cities were in operation some 20 tubes, covering almost 5 miles, and transmitting, approximately, 10,000 messages daily; and whereas this total of 129 tubes, covering 45 miles, and transmitting over 51,000 messages daily, was increased almost imperceptibly as to plant, the number of messages amounted in 1890 to 105,000 daily. In London the tubular post oftentimes travels a mile in 70 seconds, if the tube is not more than a mile long. Of course the speed of the carriage varies inversely with the length of the tube.

The English system of pneumatic tubes.

The pneumatic system of Paris was first begun in 1866, by connecting the general post-office with the bourse and one other important station. In 1876 there were seventeen stations directly served and twenty-nine indirectly served. The last year over 8,000 pieces of mail matter were daily transmitted by tubular post in Paris. Of these, 2,500 were sent from the bourse to the central station, and trains were dispatched every three minutes. The first cost of the Paris system was about \$200,000, but it is to be said that another \$200,000 will be required to complete it as originally projected. The cost of the tubular message in Paris is the equivalent of 10 cents. In Vienna, where the system is much like that in Paris, the cost per message is the equivalent of 6 cents. Eight of the nine districts of Vienna are reached by the tubular post, and collections are made half-hourly.

In Paris and Vienna.

A reference to the appendix will show in detail how successful our European friends have been in the use of the pneumatic post, and how trivial by comparison any efforts made in this country have been. Several inventions, to be sure, have been presented to the Department; but they are not accompanied by propositions and estimates which indicate that their promoters understand at all the gravity of the undertaking which they would have the Government enter upon. The most pressing present need of the pneumatic system in this country is doubtless in New York and

The tubular post in New York.

Brooklyn. Postmasters Van Cott and Collins are enthusiastic, and they have had frequent cause to know of the interest which the Postmaster-General has taken in this movement.

Would the
Western Union
allow it?

The only system brought to the attention of the Department contemplates the attachment of tubes to the elevated railroads in both cities and to the bridge; and I have no doubt that, from a business point of view, the establishment of this plan would be unqualifiedly successful. Upon the mechanical phase of the question, however, experts ought to speak. Whether a tube that should work acceptably would have to be put under ground would have to be determined; and whether the people of New York want their streets dug up is a question; and whether the Western Union Telegraph Company, having its branch offices all over the city and doing no doubt a very profitable local business, would not oppose, in and out of Congress, any proposition for a Governmental tubular post which they might fancy would interfere with their "vested rights," would remain to be seen. The experience of the telegraph in Berlin would seem to indicate that a tubular post in New York would help the Western Union; but I have had some opportunity to know that a proposition, certain to benefit this telegraph company in a perfectly legitimate way in its ramifications all over the country, has been received by one of its important managers, at least, with disfavor; and it would therefore be an open question whether the bugbear of a "vested right" would not after all stand in the way of local postal improvement in the metropolis.

Private capital
might invest.

It occurs to me that in New York City and in other places some pneumatic system for the quick and widespread distribution of packages, and for the incidental transmission of postal messages, might be developed by the enterprise of private capital. Certainly those who argue that it would pay the Government ought to be able to appeal with confidence and success to private capital; and I do not see why, if a responsible private scheme were inaugurated, the Post-Office Department might not make advantageous contracts for the transmission of postal packages and letters.

But if it is held, as I think it is cogently held, that it is the right purpose of the Post-Office Department to utilize every resource and invention of science for the quick and cheap transmission of intelligence, then an appeal to Congress ought not to be without avail. I confidently look for help in this appeal, not only to the members of Congress

from the States liable to be most interested, but from the members everywhere, who, I am sure, are willing to see an equalization of postal extension, especially if the concessions to different localities are self-sustaining.

The pneumatic system of Berlin has been personally examined by Postmaster Field, of Philadelphia, and he long ago recommended an examination, by competent engineers, of his proposition to connect the East Chestnut Street station in Philadelphia, which is the center of the business portion of the town, with the main office. Within the last month a proposition has been made by Mr. J. O. McHenry to lay a pneumatic tube under ground, between these two points, and to allow the Department sufficient time to experiment, carefully and without charge, as to its practical advantage; and if the Department should choose to rent the plant, a reasonable rate would be accepted; or if, again, the Department preferred to purchase it, this might be done at the actual cost of the plant as shown by the construction bills, which, it has been agreed in advance, shall not exceed a total of \$25,750. The Department is not to assume any responsibility at all, whether it rents the plant or not; but it would be expected to furnish steam power from the main post-office, where there is now plenty of it. I am at present awaiting the applied-for approval of the Secretary of the Treasury of the use of this power, and asking for permission to make the necessary connections between the Post-Office building and the proposed tube. It will also be necessary to secure the consent of the Philadelphia councils to lay the pipe in the streets.

A definite plan
in Philadelphia.

In St. Louis Postmaster Harlow has made efforts similar to those of Mr. Field. There is a subway running near the post-office and through an important part of the business quarter, and encouragement is held out that a pneumatic service may be started by private enterprise if the authority and resources of the Department can not be used. A proposition from Chicago, which is certainly worth examination, has lately come in.

I suppose that \$100,000 would be enough money to try experiments which should prove the practicability of the tubular post, and I reiterate my earnest desire that it might be set up in New York, to meet the increasing needs of the metropolis; in Chicago, to illustrate the perfection of our postal development at the World's Fair, as well as to meet the business needs of that city; and in Washington, between the Capitol and the other public buildings, so that members of Congress and visitors to the capital city might

\$100,000 for experiment.

see for themselves, if they chose, the exact method of its operation; and, of course, I should like to see it in cities like Philadelphia, St. Louis, and others of importance, if arrangements can be made, and ultimately in all the large cities, as a necessary step in the march of postal improvement.

TO DISPATCH MAIL INSTANTLY.

Cancelling
stamps by ma-
chinery.

In the larger offices, at certain hours of the day, the mail accumulates faster than the regular force is able to handle it—at midday, for example, and towards evening, when business offices close. Trains can not wait, nor is it possible to have always at command an extra force of substitute stamping clerks. The remedy seems to be in the use of machinery for the cancellation of stamps. Practical tests of several inventions have been made during the past year, and a machine, with a capacity of six men, has been adopted at a rental of a little over \$1 per day for each machine. These contrivances face-stamp, cancel, count, and bunch 30,000 letters or postal cards per hour, and do the work uniformly and legibly. This is a great saving over the old-fashioned hand-stamping, and wherever the machines can be introduced for all day stampers can be released for other important work.

Stamping the
minute.

A new automatic machine has been submitted to me within the last month, which is now under test. In this one the cancellation will also stamp the year, month, day, hour, and minute the letter passes through. The machine seems almost to think as it works. The general use of such machines to fix the time when the mail leaves a post-office, and the use of street boxes, automatically stamping the minute when the matter is deposited, will quicken the mails at all points, and properly locate the blame for all delays.

NEEDS OF THE NEW YORK OFFICE.

Early efforts
for New York.

Almost the first thing I did as Postmaster-General nearly three years ago was to take up the subject of improving the New York office, which I regarded, in many respects, as the heart of the service. The chief difficulty in the way was the building which the service had outgrown. The Postmaster-General has no control over public buildings; he is only a tenant of the Treasury of the portion occupied by the post-office. I immediately secured the personal visit of Mr. Windom, then the Secretary of the Treasury, and of Mr. Windrim, then the Supervising Architect, to New York, and personally demonstrated the urgent needs of the service; and I endeavored, first to get additional accommo-

dations in the building and alterations to give light and ventilation and improved postal furniture; but the additional room could not be taken from the other occupants of the building, and the more important part of the alterations had to be postponed for lack of appropriations. The result was not strange. So long as public buildings are erected for the joint occupancy of United States courts, offices of the Treasury, and Interior Department officials, as well as the post-office, each claiming portions, it will be impossible for the post-office to adjust itself to the requirements of an ever increasing service.

Finding myself powerless to accomplish anything in improving the present building, I began the advocacy of a new one, and endeavored to secure the passage of a resolution appointing a commission consisting of Messrs. Dana and James and three of the Cabinet officers, to examine thoroughly the postal necessities of the metropolis. The bill did not find a place on the calendar notwithstanding the active efforts of Hon. Roswell P. Flower. All this time, however, in spite of the almost insurmountable obstacles of cramped quarters, and wasteful conditions under which the service must be organized, I felt it my duty to do the utmost to secure good work. In the three years just past nearly \$300,000 of additional allowances have been made for clerk hire, and in the same time \$235,500 additional has been granted for carrier service; while the mail messenger service has been increased at a cost of nearly \$20,000.

Allowances
were large.

In 1880 the population of New York City was 1,206,299; in 1890, 1,515,301; an increase of 25.7% per cent.

In 1880 the number of carriers was 470; in 1890, 1,160; an increase of 134.3% per cent. Three hundred and ninety-two of these carriers were appointed in 1889, 1890, and 1891.

In 1880 each carrier served 2,566 persons; in 1890, 1,372 persons.

In 1889 the gross receipts of the New York office were \$5,430,171; in 1890 they were \$6,026,829; an increase of 11 per cent. In 1891 they were \$6,386,521; an increase of 6 per cent.

In 1889 the allowance for clerk hire and free delivery was \$1,972,560; in 1890, \$2,204,724, and in 1891, \$2,366,969.

In 1889 the allowance was 36.32 per cent of the receipts; in 1890, 36.58, and in 1891, 37.06.

The postal position of New York is unique. While the city population is not much over one and a half millions, probably not less than two millions and a half of people post and receive their letters and packages at the New York office. The great daily and weekly newspapers and magazines of the city pour in tons of second-class matter every day, and promptly to handle the volume of mail massing at the present building is not in the range of possibility. The quick treatment of such a volume of matter requires room

Wretched post-
office accommodations.

for organization, with enough furniture of the right kind and plenty of light and air. The wretched cellar and first floor of the present building lack all of these requisites and the conditions grow worse every day as the mail increases. To keep the greatest of our post-offices at the extreme lower end of the narrowest part of the city, with its two hundred streets stretching from river to river, is to continue to work at immense disadvantage. To turn the present first floor of the post-office into the chief substation to serve all parts of the town south of Canal or Houston streets from river to river, and to dispatch the newspaper and magazine mails as rapidly as possible is all that can be done properly with the old building.

A new building necessary.

A high one-story building with a gallery, somewhere uptown, would speed all the northern, eastern, and many of the largest western mails that go by the West Shore and New York Central roads, and by the Twenty-third street, Erie, and Thirty-fourth street ferries. The foreign mails should be separated on shipboard for the uptown and downtown offices, and carried by boat to the nearest ferries. At least two-thirds of the inland mail could be hastened with a building uptown. The other one-third, going by the Pennsylvania and the Baltimore and Ohio roads, would not be retarded, as the boat service to the ferries would be quicker than the draying across the crowded city.

Pneumatic tube system recommended.

The downtown and uptown offices, as I have already insisted, should be connected by pneumatic tubes, and the Brooklyn office should be so connected with the New York office; and a pneumatic tube from the uptown office to the Forty-second street station would be necessary. The ideal service, however, would be to connect all the substations with a belt line of tubes, that mail might be exchanged among them and that the outgoing mail of New York and Brooklyn might be massed at the great upper and lower stations in New York for quick dispatch to railroads and steamships. The cost of such improvements would be trifling in comparison with the time and convenience gained.

A letter from Brooklyn to Harlem ought to be delivered at a residence near the tubular station in ten minutes, and a letter from the lower office to One hundred and seventieth street should be in the hands of the addressee in six minutes. The capital and enterprise of New York have not yet fully risen to the occasion, but a proposition just received offers to connect the New York and Brooklyn offices with tubes at a cost ranging from \$85,000 to \$150,000. It is believed that it would cost \$250,000 to establish tube

connections with the Grand Central Station. The whole subject, of course, can only be referred to Congress.

WHAT WASHINGTON NEEDS.

The site for the new post-office building in Washington has been fixed by the Government, but the condition of the post-office building now in use was so unsatisfactory that I determined not to authorize its continued occupancy for the inevitably long time that will be taken to complete the new structure. Propositions were invited by public advertisements for the erection of a temporary structure; and of the proposals received I selected one for a commodious building on G street, between Sixth and Seventh northwest; only a short distance from the present location; in the immediate neighborhood of the cable lines; close to one of the busiest thoroughfares of the city, and not too far removed from both the railway stations. A contract was executed to lease this building when completed for a term of three years, with the privilege of renewal, at an annual rental of \$16,000; and there was an additional stipulation that the owners are to place in the building new, improved post-office furniture and equipments to the value of \$10,000. That portion of the new building under lease will contain not less than 50,000 square feet, or two and one-half times the whole space now available. It will be so arranged that not a single office necessary to be visited by the public will be above the first floor.

Temporary
quarters rented.

I suppose it would be considered no concern of mine; but what Washington needs is a commission of citizens, engineers, members of Congress, and perhaps Cabinet officers, to suggest how some wise, economical, and farseeing plan for the erection of needed public buildings might be accomplished according to a definite, artistic, business-like plan. It would mean a saving in the end of \$20,000,000 perhaps; and meantime the architectural hodgepodge, whose only merit is its infrequency, would disappear, and the executive departments would be housed in buildings owned by the Government and forming part of a splendid whole.

THE CHICAGO POST-OFFICE AND THE WORLD'S FAIR.

The lower floor and basement of the public building occupied by the Chicago post-office serves only to handle the mail of a portion of the city, because there are fifty-seven other distinct post-offices scattered over Cook County, comprising the consolidated city of Chicago. Some of these districts are separated by swamps and water, and the old

post-offices therefore could not be abandoned for a general carrier service from one office. As rapidly as possible, however, all the outlying offices should be united with the main office, and those in the immediate vicinity of the World's Fair grounds should be added without delay.

There is no time to be lost in preparing for the great postal business incident to the World's Fair. The city population will doubtless be doubled. In addition to the branch office on the Fair grounds the first step will be to obtain much-needed room in the present building. Either the whole of the second floor must be assigned and added to the post-office, or some other building for the entire service must be secured temporarily, or endless confusion, chagrin, and loss will be the result. It is stated that a pneumatic service is projected for the city, and if in practical operation the main post-office should be connected with the central railroad stations and with the branch office at the Fair grounds. As this extra service is an incident of the World's Fair, an item for the extra post-office work should be included in the appropriation for the Fair.

HOUSE LETTER BOXES.

Requirements
for house boxes.

A commission appointed by the Postmaster-General in the fall of 1890 examined 564 models and designs of house letter boxes which had been submitted by inventors agreeably to an advertisement of the Department calling for some device in which the letter-carrier could deposit mail without delay and from which he could also, as he went his rounds upon the same trips, collect mail without delay. Not one of these devices exactly fitted the requirements; for the box must necessarily be inexpensive, neat, proof against the weather, proof against mischief-makers or thieves, simple enough not to get out of order and not to require time to open, ornamental enough to please the householder, big enough to receive papers, and ingenious enough to indicate the presence of mail matter to the passing collector.

Devices recom-
mended.

In June last the commission began the examination of 1,031 other models and designs, some of them entirely new ones, some improvements upon the previous devices submitted. Not one of these was entirely acceptable. But the commission commended twenty-two boxes as possessing novel and meritorious features. All these were put on exhibition at the Department, in order that inventors and persons interested might point out any evident defects. Then the commission again convened for the purpose of considering, in the light of all subsequent information, the merits

of the above-mentioned boxes. It was decided to commend to the attention of the public first, a slot; second, a slot with an inside box to receive mail; third, a slot with an inside box to receive mail and in which mail may be deposited to be collected from the outside; fourth, an outside box to receive mail; fifth, an outside box to receive mail and from which mail may be collected; sixth, a box to be placed in the walls of buildings during their process of construction.

It is evident that, if the problem of expediting deliveries were the only consideration, boxes could be found readily enough; for if, as is estimated, the quarter part of the time of the carrier is wasted waiting for persons to come to doors or windows to receive mail matter, the number of deliveries in a given town could be increased by a quarter, or surely by a fifth, which would be a considerable gain. But this is not the whole problem. The Department can not put the boxes in for the householder gratis. It probably could not properly put the boxes in if it had money of its own to spend, and if the householder, on his part, wanted the Department to do it for him at its own expense. It must be an act perfectly voluntary and personal on the part of the householder and entirely without cost to the Department. Some inducement, therefore, beyond the mere convenience of the Department (such as would be involved in the use of delivery boxes pure and simple) must be offered to the householder. The Department must provide, if it is able, some means by which the desired purchaser's mail may be collected, as well as delivered, at the door. Here enters the element of difficulty in devising a collection as well as a delivery box which shall meet all of the enumerated requirements.

I firmly believe that one or more of the recommended boxes will prove, upon experiment, of such desirability to the householder that he will want to continue to use it; and I believe also that any gain of time to the carrier force that would be involved in the expedition with which mail could be delivered, could not more than be offset by the loss of time required to call at each house where the automatic signal on the letter box indicated that mail was ready for collection. In that case (supposing, that is to say, that no time is gained, and hence no additional trips of the carriers out and back can be afforded by the Department) it would at least be true that the incidental benefit (namely, the collection upon every trip from every house where mail is ready, as well as the delivery of all mail to the front door)

Collections
from house to
house desired.

A great convenience without
cost.

would be, as it seems to me, an incalculable improvement. The two processes, the house-to-house delivery and the house-to-house collection, would fit into each other with such nicety that the Department, evidently without going to any extra expense at all, could supply all householders where the free-delivery service exists, with delivery without delay, and with security against the carelessness or inquisitiveness of servants, or the accidents of irregular conditions, and, in addition, the collection from each door—an entirely new thing—which provides the same security and avoids the inconvenience of going out or in sending others out into the weather.

How to introduce the boxes.

My plan for the introduction of the house letter boxes would be somewhat as follows: I would have the Department accept an offer, or offers, which, I have reason to believe, will be made by one or two, if not by the whole six, of the inventors, whose devices are to be commended, to furnish a sufficient number of boxes to supply six given carrier routes—preferably in Washington, as the experiment could then come under the direct observation of the Department. Each of the six inventors would supply a single route, so that it could be determined which box worked best from the departmental standpoint. The box evidently most acceptable to the householders also could be selected after this experiment of three months, say, was over. The owners may be depended upon to introduce the box energetically by a house-to-house canvass, and by having them on sale at suitable places.

I should like to see free delivery furnished, carefully but surely, to all parts of the country where the population is thick enough to warrant the employment of carriers; in the cities I should like to see the immediate general employment of the door letter boxes, for collection as well as delivery, as a compensating advantage.

UTILIZING STREET CARS IN CITIES.

The Neslin plan in St. Louis.

In discussing the utilization of street cars in cities for the collection and delivery of mail, I do not refer to the attachment of letter boxes to cars, in which mail matter may merely be deposited, for it has been found upon thorough inquiry that this method has not resulted in advantages which compensate fully enough for the scattering of forces which would be involved in the partial abandonment of one method of collection and the partial adoption of another, not to mention the difficulties—not to say dangers—attendant upon depositing mail in boxes attached to cars in

motion and the difficulty and expense connected with securing the consent of the car companies to the arrangement. I refer to the adaptation of the wagon service of Berlin to the street-car systems of the larger American cities. In the German capital, as is well known, mail matter is treated in wagons both for distribution more quickly to carriers and for instant dispatch to the post-office after collection. The best advance in this direction in this country has been made in St. Louis, where the postmaster, Maj. Harlow, has been trying for a long time to make arrangements with the street-car lines radiating from the post-office to permit the attachment of postal cars, in which mails, outgoing and incoming, may similarly be "worked."

The majority of complaints in all large cities regarding the postal service locally is the long distance which the public are required to go to transact postal business, such as the purchasing or cashing of money orders or postal notes, the registering of letters, the purchasing of stamps in quantities, etc. In St. Louis, for instance, there are but six points, the main office and the five stations, where these conveniences are to be found. The city covers a territory of 62 square miles, and the public really has but one postal center for every 10 square miles. There are also frequent complaints about the length of time required for a letter mailed in one part of the city to reach another part. There are natural causes for this slow process of delivery, as there is no interchange among the postal localities within the city except through the main office.

Poor facilities
in cities.

The postmaster proposed the establishment of at least thirty or forty substations, to be located upon certain street-car lines, upon which a street-railway post-office was to be established; the railway post-office to consist of a full car, or an apartment in a car, the interior of which was to be specially arranged for the work to be performed and run upon a regular schedule. The mails would be sent to these cars from the main office bagged direct to each substation, and a clerk familiar with the city distribution would be in charge of each car to receive and distribute all matter posted on the car or received from one station for delivery at another. This would insure an exchange among all the stations. The carriers at the substations would depart with their mails for delivery immediately after the arrival of the cars and arrive at the stations with their collections in time to connect with the cars on their return trips.

Objects of the
street railway
post-office.

This system would largely increase the volume of local

Savings of time
involved.

mails, because it would permit of later mailings and more frequent deliveries and collections, and in all postal directions of a local nature would be a greatly appreciated improvement. The substations would be so located as not alone to be available for the convenience of the public, but certain ones would serve as exchange points for the carriers, obviating long walks or rides and the loss of time consequent to them, which under the present system is chargeable against the Department and is included in the duty hours of the carriers. In this last item alone the Department would save in St. Louis from eighty to one hundred hours per day, which means at least a gain of ten or twelve carriers.

Street car facilities.

The postmaster at St. Louis, after a long series of negotiations with the street-car companies which might most effectually be brought into play, found that the compensation demanded for the service would put its adoption quite out of the question, and this, too, although it was admitted by the railway managers that the prospective undertaking would be of financial benefit to them. The people of St. Louis, as I find, have inquired into this general subject a great deal and are thoroughly in favor of it, as the postal officials there certainly are; for, though the local service would be rather more complicated, it would surely be more efficient and economical. It is, indeed, beyond calculation, as I believe, how much the local postal systems of cities are not made use of—for the simple lack of facilities for purchasing stamps and envelopes, for depositing mail, for utilizing the registry and money-order systems and the special-delivery service, and equally for receiving the benefits of all these postal adjuncts. It is for this reason that efforts have been continuously made for the past two years to extend and popularize with the limited means within my control all these branches of the service; and for this reason, too, it is gratifying to be able to record that negotiations are still in progress in St. Louis for the adaptation of the street railway post-office, and also, as is the case in New York and Philadelphia, for the utilization of the pneumatic-tube system.

RURAL FREE DELIVERY.

The rural free-delivery experiment is on trial in forty-six communities. In two places, Hillsboro, N. Dak., and Hanover, N. H., this service was begun, but was discontinued because the postmasters failed to procure responsible carriers for the maximum compensation of \$212 per annum for one or two hours service per day. In Appendix A appears

a tabulated statement showing a total increase of gross receipts in 39 of the 46 experimental free-delivery offices amounting to \$6,213.49, and a total decrease of gross receipts in 7 of the offices amounting to \$707.39. This leaves a balance of \$5,506.10 of increase of gross receipts. This total of excess of gross receipts over expenditures is divided in the appended tables into what is due to natural growth and what is attributable to the free-delivery service. The excess of receipts due to natural growth is obtained by comparing the gross receipts of 1889 with those of 1890 for the same period; and the balance, \$850.50, over and above the additional cost, which is entirely an abnormal increase, is to be attributed to the free delivery.

Increased the receipts.

This astonishing result is arrived at in another and perhaps a clearer way. Between February 1 and September 3, 1891, the 46 experimental offices aggregated 285 months of free-delivery service, at a total cost of carriers of \$4,320.69; and a net profit which may be credited to the free-delivery service of \$850.50. An entire year, aggregating 552 months for these 46 offices, would have resulted, according to the above proportion, in a net earning of \$3,812.54. With an appropriation of \$200,000 for the next fiscal year the net earnings, upon the same basis, would reach \$76,250.80; with an appropriation of \$500,000, the net earnings would be, by the same figuring, \$190,627, and with an appropriation of a million dollars, \$381,254. Of course the implication is that the service would be put on in communities of areas and densities of population similar to those already experimented with.

Not only paid expenses, but made a profit.

This is indeed a wonderful showing, especially when it is considered that the establishment of the free delivery causes the patrons of the office in a large measure to discontinue the box-delivery system, and that the office consequently loses to some extent its box rents out of the gross receipts. These patrons would hardly give up their boxes voluntarily if they did not enjoy the better service which comes to them without cost and inconvenience. In the Appendix appear abstracts from the letters of the postmasters where the experimental service has been established. Nearly all speak in the highest praise of it, and they say it meets with the unqualified approbation of their patrons. A few instances where the falling off of box rents has frightened the short-sighted postmasters are the only exceptions to the general rule. It is easy to be seen, by the communications from postmasters whose gross receipts show a decrease since the establishment of the free delivery, that local causes solely are

Its construction urged.

to be assigned. In some cases the loss was owing to the suspension of establishments of industry, in others to removals, and in still others to a dull season generally. A remarkable phase of the experiment is the increase of pay to the postmaster, which logically follows the increase of service.

The new free-delivery service begins to do away with a service that even now much resembles the "neighborly system" of old times, by which users of the mails carried their letters to a single point, there to lie until the beneficiaries of the mails should call for them. As one writer has asked, "Why should the cities have fancy mail service and the old colonial system still prevail in the country districts?" Dwellers in sparsely settled regions have themselves always been trying to get away from this system. What milkman, iceman, groceryman, marketman, that is not made a messenger? How much is the Department charged with the errors of the careless schoolboy? In many communities private arrangements with persons whose occupations are more or less public have met with great success. More than all this it may be argued that the duty of the Department does not cease any more in the country, when it has taken a letter upon which the postage is prepaid to a certain point where the addressee may get it if he chooses to go for it, than it does in the city, where the obligation of the Department is not discharged until the mail is delivered to the house door.

Benefits of rural free delivery.

But there are a great many detailed reasons in common, every-day affairs, if not in social philosophy, even, why the free-delivery experiment has succeeded and ought to be extended. The rural dweller pays the same rates of postage and has the same right to the common postal facilities that the inhabitant of the city has. Indeed, it is fair to question whether, with his papers and books and packages that he receives, he does not do more postal business than his city cousin does. Often he makes many long, disagreeable trips to the post-office without result. Surely if every trip that he made were to yield him a piece of mail the process would be bad economy, because he would be doing almost as much traveling and would consume almost as much time as a single messenger would in serving the whole neighborhood. His local paper, perhaps his city daily, would come regularly without effort on his part, and his whole home life, his information, his inquisitiveness, his ambition, would be quickened. The local paper would profit by the change not only because it would be more generally subscribed for if it came

regularly without effort, and because the expense of special carriers would in many cases be done away with, but in dozens of ways, known only to newspaper editors, in the course of the year would its columns be supplied with news matter which, instead of being taken to the office by messenger once a month, would be mailed every week. The large daily in the city, while it would not profit in this second way, would be benefited far more by the accuracy and regularity with which it would be distributed in all quarters of its field; and with the application of the telegraph and the telephone to the postal service the benefits to both these classes of publications would be even more increased, for the supply of news for the city daily, as well as for the country weekly, would be inestimably quickened and cheapened in the course of a year, by the injection of the free and special delivery of telegraphed or telephoned letters.

To the business man in the town the extension of the free delivery would be of immense value. I have for years advised young merchants to get into earnest correspondence with persons whom they would like to do business with. It results in more correspondence, and that results in business. Will help business. I suppose the exact benefit to the merchant, due to the regularity and dispatch with which mails went out from an office in the city and then went back into it, can not be calculated; but if this regularity and dispatch supplant the irregularity and sloth of the method of delivering and collecting the mails once or twice a week the benefits would surely be incalculable. The country is always tributary to the city; it makes the city. The extension of the postal facilities will make the business man more prosperous and enterprising.

There is a social view of this question which seems to me quite as important as any other. A great deal is said about the desertion of the farm, perhaps by the prosperous tiller of the soil who can afford to rent his land and go to town to live; perhaps by the stalwart son who craves intercourse with people because he does not have it with books and papers, or with people who have them; perhaps by the daughter of the family, who hungers even more for sympathy in her aspiration to be improved. Improve home life. The regular arrival of the paper or magazine, the easier ways to correspond, the general process of sending and receiving things by mail, will not only keep many of the boys and girls at home and make them contented there but will add to their ambition and their determination to make the old farm pay.

I think the growth of the Farmers' Alliance movement and the other farmers' movements in the past few years has been due to this hunger for something social as much as to anything else; and if, with these possible additions to the literature and the quickened intellectualities may come additions to the already quickened political thought of all the people, who can estimate the benefits to the Republic? I could not commend anything to the attention of Congress with more confidence than this proposed addition to the postal facilities, first, because it is so easy, and second, because it is so wide-reaching and, as it seems to me, so patriotic. It has been said that the innovation would be unpopular because it would break up the evening "loaf" at the post-office. There is nothing in the proposition that compels this calamity, beneficial as I think it would be; for the patron of the post-office may still go there for his mail, and may idle away his time there if he chooses, and the very fact that he uniformly appreciates the free-delivery convenience in the face of the circumstance that it relieves him of the supposed pleasant necessity of loafing at the post-office is the very best evidence of its utility and popularity.

Farmers appreciate it.

The press approves.

I have found encouragement beyond all expression for this effort in the almost unanimous support of the press of the country. Of the editorial opinions which have come to the notice of the Department 258 favor the extension and 9 oppose it. A noticeable thing about them is that many express the surest confidence in ultimate universal free delivery; and while they state the fact that this rural free delivery has been found to be self-sustaining, they insist, in very many instances, that it ought to be extended whether it is self-supporting or not. It is of course evident that, while the free delivery can be extended to immense areas of the country without expense, it is not to be expected that there will not be other areas which will not contribute any profit, and would cause losses. Preference would be given to the districts where loss could not arise.

FREE DELIVERY ON STAR ROUTES.

Utilizing Star Route messengers.

The combination of free delivery with star contract service is capable of great development through an enlargement of the custom that already prevails to some extent, especially in the far West, where the distances between settlements are great. Congressional authority would have to be procured, as the existing statutes governing contracts for star service would not admit of combining in the Second

Assistant's advertisements anything outside of the carriage of closed pouches between post-offices.

According to the custom mentioned, orders authorizing the delivery of mail to the star carrier are deposited with the postmaster, and the carrier delivers the matter as he passes the house, or by putting it into a box conveniently located at the roadside. This system prevails where the contract routes are long and the distances between boxes or deliveries wide apart and risks from theft very slight. The Congressional authority should be so given as to leave it optional with the Postmaster-General to say where and when the combined service should be advertised for, and then there would be important phases of the combination to be carefully considered.

In remote regions, where the practice is already in vogue, the expense would be inconsiderable. Perhaps the increased business would pay the cost almost everywhere. The capacity and reliability of the pouch mail-carrier would soon become suitable. Letter-carriers are appointed only after an examination to test their fitness for the position. They are also required to give bonds for the proper performance of their duties. No such examination or bond is required of mail-carriers; and an increase in the standard of qualifications, or in the security required of the carriers, would be natural and easy if it were only insisted upon.

In star service the mails are carried in locked pouches between post offices. If free delivery were combined with the star service, much of the mail would necessarily be intrusted in open packages to the carrier. The liability to loss or depredation, it would at first be thought, would be correspondingly increased, and the recovery of lost matter or the detection of depredations more difficult; not so at all, if the dignity and importance of the mail-carriers' work were increased and appreciated.

ELECTRICAL TRANSPORTATION.

A new element in transportation, which Mr. Bell has been studying closely for the past year, is likely to furnish the means of advancing mails in rural neighborhoods adjacent to cities and large towns. I refer to the electric-railway systems. They are going into suburbs not traversed by horse cars; and where other means of conveyance must be slow, because of the rolling character of the country, they travel uniformly 8 or 10 miles per hour, and with a frequency much greater than would be required even with free-delivery extensions.

Suburban facilities.

Some months ago it was possible to arrange with the electric line operating between St. Paul and Minneapolis, whereby boxes were attached to each car so that mail matter can be deposited from the outside. At the ends of the route this mail is turned over to the local offices for immediate distribution and delivery. The result has been the accomplishment of the same extent of free delivery of St. Paul and en route mail at Minneapolis as within its local jurisdiction, and *vice versa*.

The next step should be in the direction of, say, a half dozen intermediate stations upon which pouching could be made with the terminal offices. It is true this system will not ramify in sparsely settled regions, but it can be utilized vastly to improve the service between towns lying within close distances, and among rural neighborhoods. I mention Wheeling, W. Va., for example, as the base, and associate it with Benwood, W. Va., and Bellaire, Martin Ferry, and Bridgeport, Ohio. These are thriving manufacturing places, each independent of the other, but really having all the relations of one municipality; and the electric system will permit of a frequency of mail interchanges nearly as desirable as that attending free delivery itself. A similar case is receiving attention on the Mississippi River between Davenport, Iowa, and Rock Island, Milan, and Moline, Ill. I believe opportunities of the same kind will become more and more frequent.

TOWN FREE DELIVERY.

Reduce population limit to 5,000.

I cordially recommend the passage of a bill to entitle all towns of a population between 5,000 and not exceeding 10,000 to the privilege of free delivery. This recommendation is in conformity with the generous custom of Congress to extend the system into towns smaller and smaller; and though the step from populations of 10,000 down to populations of 5,000 is long, I think the remarkable success of the free-delivery experiment justifies the expectation that nothing but beneficial results would follow. A similar proposition, indeed, was warmly received everywhere last year, as an appended list of almost a hundred papers, which commented favorably upon it, shows; and I have not heard in any quarter or read in any public journal that the measure was opposed.

The free-delivery service was first established in 1863. Then at 49 offices there were 449 carriers, at a first annual cost of \$300,000. In 1872 cities of a population of 50,000, as a lower limit, were admitted to the privilege, and the next year the limit was extended down to populations of

20,000; and before this act of 1872, amended in 1873, was passed, there were 52 free-delivery offices, employing 1,498 carriers, at an expense of something over \$1,420,000 annually. After the amended act the number of offices increased to 87, the number of carriers to 2,049, and the annual cost of the service to a little over \$1,800,000. In 1882 3,115 carriers were employed in 112 offices, at an annual expense of a little over \$2,620,000. The extension to towns as small as 10,000 or of \$10,000 revenue was accomplished in January, 1887. Just before this the 189 free-delivery offices employed 5,310 carriers, at an annual cost of \$4,618,000 and a little over. After the passage of the act of 1887 the number of offices increased to 358, the number of carriers to 6,346, and the annual expense to a little over \$5,420,000.

How free delivery grows.

Last year there were added 65 offices, which, with the old ones, employ 1,064 additional carriers, and alone serve 517,065 people. The whole number of free-delivery offices was 519, with 9 added since the first of July, making 528 to date, with 13 to be established January 1, 1892; and from them altogether the mail is carried to the homes and business places of 19,673,977 people. If a law is passed to allow the extension to towns of 5,000 to 9,999, 161 more places can be added immediately, and 1,130,972 people served. The annual cost will be \$377,489. If all the Presidential offices now without carrier delivery, 2,254 in number, were granted free delivery irrespective of population, the cost the first year would amount to \$3,685,000.

Will serve over a million of people

I may be pardoned for referring briefly to the two very important reasons why it is beneficial to extend the free-delivery service in towns. In the first place, the facility soon pays for itself, and, under these circumstances, it would seem as if no possible objection could be made to the extension; in the second place, a new life, dignity, and importance is added to the locality. I confidently look forward to the time, and it will come within a very few years, when the extension of the free delivery to the smaller towns will meet the rural delivery, and in a few years cover the country districts with a letter-carrier service, for delivery and collection both, from house to house.

IMPROVED SPECIAL DELIVERIES.

A 10-cent special-delivery stamp on a letter will keep it in motion after it reaches the post-office or substation until it is delivered to addressee. If the letter is deposited in a street letter-box immediately after the carrier has gone his

rounds it waits until his next call, but in the larger cities the collections are seldom less often than hourly, and at periods of the day they are even more frequent. Sometimes delays occur from using 12 cents' worth of ordinary stamps, which do not mark the letter so well as the large, distinct blue stamp. I favor a reduction of the rate to 6 cents (and the usual postage). The lower rate will double or treble the business and the convenience.

No Sunday
work.

The only forcible objection to the system is that it does not work well on Sundays, as the post-offices make no Sunday delivery. All postmasters are allowed to fix Sunday hours for their offices, and some choose to make deliveries of special-stamp letters; but the rule of the Department is to discourage Sunday work for men already overworked. The public surely sympathizes with this practice and there can be no charge of injustice made against the Department, as all who use the special-delivery stamps know that post-offices are only opened on Sunday for general deliveries and that no street deliveries are made. The system is reliable and quick. The average time last year to the delivery of each letter was twenty minutes, and often the distances were very great. The number of pieces delivered last year was nearly two and a half millions, and in 1886, the first year, was but a little over one million. Last year the increase was nearly one-third over the average of the past four years. The larger the business the better the wages earned by the messengers. They are paid by the piece, and at some offices are substitute carriers awaiting vacancies. By using men the safety and promptness of the system are enhanced.

THE PEOPLE'S SAVINGS.

To aid working
men and women.

Out of 65,000,000 of people in the United States it is believed that there must be twelve millions of men who work at wages to earn a living. Add to these the working women, and the youth who are also toilers. A large percentage of them strive to keep a part of their earnings for use in old age and sickness, but to many others saving does not come naturally and they ought to be encouraged. The making of money is a part of the genius of an American, but the saving of it is not so conspicuous. Part of the cause may be found in the lack of conveniences for saving, and the fact that in the sections of the country where savings funds exist many of them have gone down and the hard-earned gatherings of years have been lost. It is charged that abundant facilities for storing of money exist under the care of the Government for the rich man in

No conven-
iences for farm-
ers.

the national banks, and that no provision is made for the laboring man.

I am more than ever convinced of the wisdom of allowing to the frugal and thrifty workingman, and especially to working women and youth, the privilege of using the post-offices as places of deposit for small sums. Whoever counts himself a friend of the working people must favor some such measure. The term savings banks is misleading, as the plan only creates depositories at the post-office. The deposits, never exceeding say \$300 or at the utmost \$500 from one person, could not injuriously affect the old savings-bank system, but would feed them by transfer of the larger sums accumulated at the post-office depositories. The phenomenal and temporary upsetting of banks in Philadelphia and New York State, in Boston, and elsewhere, has alarmed the people and driven to withdrawals from banks and other places of deposit vast sums of money which have been retired from circulation. "Runs" on banks and saving funds, the forerunners of financial panic, often start with working people who have lost so frequently that they are easily alarmed. These "runs" would not arise if the Government had the care of the money.

Depositories
but not banks.

The gold and notes hid away by nervous, untrustful people exceed in amount all the gold exported last year, which occasioned on the part of eminent financiers no little fear of disturbance of American finances. Almost all the secret and undeposited savings of the people, it is believed, would be turned over to the Government if postmasters were authorized to receive them, and then the Treasury becoming responsible could send them into circulation back to the people through the banks, which for stability and soundness are as a whole unequalled in the world. While a very few are opposed to the banks handling these savings, what other plan as good could be adopted to get the money into circulation, subject to prompt repayment to depositors? To invest in Government bonds would be impracticable, as all the bonds are now at a premium, and subject to retirement at certain and not distant periods, when they are to be paid off at face value.

Government
responsibility.

It has been suggested that the money be put into circulation by loans on farms and other real estate, but this would involve expenses of valuation, preparation of papers, and a new bureau with clerical force to attend to the accounting. A plan has been discussed with some of the members of the Farmers' Alliance for the city or county registrar to issue to the owners of real estate a registered certificate of the

assessed value of real estate offered as security with a guaranty that no liens of record exist against the property, such certificates to be accepted as security for loans say for one-third or one-half the assessed value, and all loans to be put upon record as notification to other lenders.

The changing value of real estate and the temptation to advance assessments for borrowing purposes are the least of the serious objections to this plan, the greater objection being that the Government ought not to be put into a position where, under certain contingencies, it would be obliged to enforce payment by a sale of real estate that might involve turning out women and children from their homes.

Deposits as
small as one dol-
lar.

I repeat the plan set forth in my last report, which in somewhat fuller detail is as follows: At designated post-offices to receive on deposit sums of not less than \$1, which may be in postage stamps on cards to be furnished, interest to be added from the beginning of the next month after deposit, on sums of not less than \$10. All deposits to be transmitted to the Secretary of the Treasury, who shall, at the beginning of each half year, fix the rate of interest to be paid to depositors, said interest to be one-half per cent less than the current rate at savings funds and private banks at the monetary centers.

The Secretary of the Treasury shall keep account of deposits by States, and, to put the money in circulation, shall offer the funds arising in each State as a loan to the national banks of the same State, at a rate of interest to be fixed by him, and these sums shall be declared trust funds and shall be a preferred claim against the assets of the banks.

Very simple
plan.

Another plan, quite simple and thoroughly practical, would be to issue at the post-offices non-negotiable certificates of postal deposit in sums of \$10, \$20, \$50, and \$100, for easy computation, bearing interest at the rate of half a cent a day on a hundred dollars (\$1.82½ per year), or a little less than 2 per cent per annum after the first of the month following the date of deposit, and principal and interest payable on demand at any money-order office by proper indorsement and identification under regulations of the Postmaster-General. The money deposited in each State to be reinvested so far as possible in the same State in school or municipal bonds by the Postmaster-General, subject to the approval of the Secretary of the Treasury.

Start with
States in which
no savings banks
exist.

In establishing these depositaries due care should be taken to provide first for the States without savings banks.

The reports of 36,598 postmasters state that the distance of savings banks from post-offices varies from a few feet to hundreds of miles, and the actual average of distance in 1876 out of 2,807 counties in the United States is 28 miles. As the post-office is within easy walking distance of the home of every man, woman, and child, so would the place of deposit for savings be equally accessible and convenient.

Statistics show the distances of post-offices from savings banks.

It is proper to add that the last annual reports of the postal savings departments of foreign nations show an increasing confidence and usefulness in this branch of the Government service. For example, the number of new accounts opened during the year 1890 in the British post-office was almost one million (997,283), and the total number of accounts was almost five millions (4,827,314), which was over three hundred thousand (319,505) more than ever before. The population of Great Britain being 38,000,000, this is one to every eight inhabitants. The greatest number of deposits in any one day during last year was 61,494, and amounted to over half a million of dollars (\$524,750). All told, there were 8,776,566 deposits made during the year, amounting to almost one hundred and five millions of dollars (\$104,953,460), which was nearly six millions of dollars (\$5,881,920) more than in any previous year.

Successful operation abroad.

From the deputy postmaster-general, Hon. William White, Ottawa, Canada, I am in receipt of the following facts touching the advantages of the post-office savings banks:

First, to the people personally: (1) Absolute security from loss; (2) convenience of making deposits; (3) repayment not affected by change of residence; (4) safety against personation and fraud; (5) prevention of poverty, or temporary want, by developing habits of thrift and saving; (6) gives, where no other banks exist, a means of ready and safe deposit; (7) discourages reckless and speculative expenditures; (8) educates the young and untrained to a knowledge of the use and management of money.

Extract from letter of Canadian official.

To the country: (1) The people receive the profits (interest) of their savings when used as a public investment; (2) the country's wealth is kept growing within itself; (3) by the wide distribution of these savings money thus invested can promptly reach points needing it suddenly from local causes; (4) in remote places, stringency from too limited banking facilities is prevented or lessened; (5) the laboring people feel a direct personal interest in the stability of the country; (6) sectionalism among the less intelligent classes is lessened by continual and close touch with a common financial institution; (7) by special investment, the people's savings may be made the foundation of securities for financial institutions, or loans for municipal improvements, or special national undertakings.

Wherever post-office savings banks have been opened, they have been considered a great boon. In 1868 (the year

of beginning) there were only 81 such banks in Canada, and the balance at the credit of depositors then was \$205,000; now there are 638 banks and the balance due to depositors is \$22,000,000. The whole cost of management averages annually one-quarter of 1 per cent on the balance due to depositors.

This very interesting letter has just been received from Mr. Blackwood, secretary of the British post-office:

GENERAL POST-OFFICE,
London, November 18, 1891.

SIR: On the 11th instant I received from you a telegram in the following words:

"Kindly give me your opinion of advantages of post-office savings banks connected with the postal system. Is there much additional expense, and are they of conspicuous service to the people?"

To this I replied on the 13th instant:

"Conspicuously successful and beneficial. Letter follows."

In fulfillment of the promise made in my telegram, I now proceed to give by letter further details relating to this subject.

The best evidence of the usefulness of the Post-Office Savings Bank is afforded by the magnitude of the business transacted. From the year 1861, when it commenced, to the end of 1890, there were 113,000,000 deposits, and 39,000,000 withdrawals, amounting to £285,000,000 (\$1,387,950,000) and £236,000,000 (\$1,149,320,000) respectively. Upwards of 15,000,000 accounts were opened and 10,000,000 closed, there being at the end of 1890 nearly 5,000,000 depositors, with £67,000,000 (\$326,290,000) to their credit, exclusive of £4,500,000 (\$21,075,000) in Government stock. In the United Kingdom there are 10,000 separate post-offices for carrying on savings-bank business. The annual "turnover" now approaches £40,000,000 (\$194,800,000).

As regards the cost of management of post-office savings banks, I may direct your attention to the statement at page 46 of the Thirty-seventh Report of the Postmaster-General (copy inclosed), in which is given the cost in each of the last ten years, as well as the average cost per transaction and the percentage of cost to the total balance (columns 10, 11, and 17). Last year the total cost was £326,394 (\$1,589,538), making the average cost per transaction, i. e. of each deposit or withdrawal, 6 $\frac{1}{2}$ d. (13 $\frac{1}{2}$ cts.), and the percentage to the balance 9s. 7 $\frac{1}{2}$ d. (\$2.35 $\frac{1}{2}$). After payment of all expenses, and of interest to depositors, there has each year been a considerable surplus of profit, which since 1876 has been annually paid into the exchequer. The sums so paid, amounting now to nearly one and a half millions sterling, are shown in a foot note to the balance sheet at page 51 of the Postmaster-General's Report, while the balance sheet itself contains a further item of £1,730,000 (\$8,425,100) "surplus of assets over liabilities."

There is another system of savings banks in this country known as the trustee savings banks which were called into existence soon after the conclusion of the great European wars in 1815. These banks have been regulated by various acts of Parliament and are now governed by the savings-banks acts amendment act of 1863. Since the establishment of the post-office savings banks in 1861, which offer many more advantages to the depositors, a large number of the trustee savings banks have been closed, and the accounts to a great extent

transferred to the post-office. A depositor in the post-office savings bank can use any of the 10,000 post-offices, which are open every week day, whereas in the case of trustee savings bank a depositor is limited to the district in which the trustee bank is situated, and such banks are in many cases open only once or twice a week for a few hours. Moreover, as regards the expense of keeping up these establishments, there is an annual loss which has to be made good by the state, such loss for the year 1888 alone amounting to £25,765 (\$125,475). The great accumulations of these losses in past years are now represented by a terminable annuity for 28 years of £83,673 (\$407,487). In addition to this, there is a yearly cost of £5,000 (\$24,350) for the maintenance of the trustee savings banks department of the national debt office.

I have pleasure in sending for your information the accompanying volume and documents, namely: (1) Volume "Origin and Progress of Post-Office Savings Banks." (2) Regulations of the Post-Office Savings Banks, 1888. (3) Stock Investment Regulations. (4) Annuity and Insurance Regulations. (5) Specimen forms for depositing by means of stamps. (6) Thirty-seventh Report of Postmaster-General. (7) Pamphlet "Savings and Savings Banks." And I think it well to point out that the volume (1) contains full particulars respecting the establishment of post-office savings banks and their progress up to a certain date. Some alterations which have since taken place may be gathered from the subsequent Regulations (2), (3), and (4), and from the stamp deposit forms (5); while statistics of the business for the last ten years are given in the annual report of the Postmaster-General (6) at pages 9, 11, and 43-51. The pamphlet "Savings and Savings Banks" (7) contains a review of the savings bank movement, in a brief and popular form.

I have the honor to be, sir, your obedient servant,

S. A. BLACKWOOD.

To give an example of how the working people use the post-office savings depositories, I quote from the official statement of a penny savings institution of which I have personal knowledge. Out of 4,470 depositors, with \$145,000 in bank, all but 64 represent deposits under \$500. The exact analysis is as follows:

Depositors having to their credit—	Number.	Character of savings.
Under \$1	1,328	
Sums over \$1 and under \$5	1,468	
Sums over \$5 and under \$10	498	
Sums over \$10 and under \$25	473	
Sums over \$25 and under \$50	221	
Sums over \$50 and under \$100	183	
Sums over \$100 and under \$200	124	
Sums over \$200 and under \$300	56	
Sums over \$300 and under \$500	53	

Such an accommodation with the Government guaranteeing the safety of deposits would quadruple its use and shed gladness and hope throughout hundreds of thousands of homes. The objection that the postmaster would have more

work, and that larger bonds would be required, should not be permitted to stand, as many of the postmasters are conducting the money-order offices for which they are bonded, and I think it will be found that almost all the postmasters' bonds are unnecessarily large at the present time.

P. O. Department already equipped.

The Department now handles over one hundred millions annually of the people's money in the money-order transfers and is thoroughly equipped to take charge of small savings.

It is possible that after the first year it will be found that the interest earnings will permit a percentage of increase to the postmasters' salaries, and this work would tend to securing the best class of men as postmasters.

With the undoubted evidence from every nation of the world save two, that, like the United States, have not established depositories, of the excellent results of this branch of postal service; with the agitation of this subject in this country for a quarter of a century; with the almost universal cry for it from the plain people, evidenced by letters and petitions to the Department and by the newspapers throughout the country, I urgently ask that some one in each branch of the coming Congress will study the subject, and endeavor to secure favorable action upon one of the many bills presented at every session to establish postal-savings depositories for the people. It is to be remarked that at this age no public man in this country seems to make a hobby of postal subjects that so closely touch the people.

THE USE OF BOXES FREE AT CERTAIN POST-OFFICES.

Abolish box rents in offices without free delivery.

It has been noticed in several important cities that holders of post-office boxes have voluntarily abandoned their use, expressing to the postmaster, and sometimes in the public press, their satisfaction with the free delivery, which has been sufficient to induce them to dispense with their own messengers and rely upon the accuracy, and frequency, of the carrier service. This is a gratifying evidence of the efficiency of the carrier service; but while, in a general way, I wish for all the evidences possible of this improvement, it is nevertheless to be remembered that the convenience of the patrons of an office is the first thing to be sought for, and that therefore the encouragement or the discouragement of the use of boxes is not to be undertaken.

It is no doubt true that the introduction of the free delivery system has largely increased the volume of correspond-

ence; and as this increase is fairly attributable to the abandonment of the old system of box delivery, I conclude that the disuse of boxes would affect the revenues of the Department beneficially. But there are in all communities persons who prefer a box delivery. I refer to banks and large newspaper offices, whose exchanges are very bulky for carriers to handle. Then there are State, county, and municipal officers who employ their own messengers; and large mercantile houses that watch the connections of railway lines so as to receive orders by mail and dispatch goods by the next train. Then there are people who advertise for information and direct answers to be sent to certain boxes in order to escape being personally overrun. All these have the right to choose how their mail shall reach them.

The rental price of boxes is now virtually left to the discretion of postmasters. I propose a uniform price, to be fixed by the Department, at which boxes are to be rented by the quarter to persons residing within the free-delivery district, which should be rated for first, second, and third class offices. Those persons living outside the free-delivery district and yet within the delivery of the office, should be provided with boxes free of charge. At second and third class offices where the free delivery is in operation there are many unoccupied boxes all the year that could be assigned to patrons of the office at a saving of clerk hire, for it is less labor for a postmaster to distribute mail matter into an assigned box and deliver it from there than to thrust it into the general delivery, which means the separation of the letter mail of a family, under the various alphabetical methods, into many receptacles, the regular and transient papers into overfilled cases, that for want of time are sometimes inaccurately searched; and the result is late delivery and sometimes none at all.

It would seem but simple justice that the patrons of an office who are denied the free delivery by carriers should have extended to them the next best service obtainable, and at the same rate, which is undoubtedly the box delivery. I am in favor of free delivery wherever it can be put into operation; but until that is provided for by law I would meet the justifiable complaints of patrons in the rural districts, who charge the Government with discrimination, by assigning to each head of a family living outside of the free delivery of the office a free box; and this, in my opinion, will not require more than 300 boxes as an average for second and third class offices. At offices where there is no free delivery I propose to abolish box rents altogether.

Uniform rental
as free-delivery
offices.

Favor free de-
livery and no box
rents.

SMALLER PUBLIC BUILDINGS—MORE OF THEM.

I cordially support a recommendation of Postmaster-General Vilas, expressed in a bill introduced in the last Congress by Mr. Blount, of Georgia, providing for the erection, at a cost of from \$5,000 to \$25,000, according to the revenues of post-offices, of post-office buildings by the Government, under restrictions as outlined in the bill so clearly as to disarm the most exacting critic, and in compliance with arguments so ably presented in House Report No. 1510, written by Mr. Candler, of Massachusetts.

Too much
money in most of
the Government
buildings.

It is well known that it is a source of frequent scandal not only that costly public buildings are allowed for favored cities whose representative in Congress is the most lucky, or the most expert in presenting convincing arguments to his diplomatic colleagues, but also that these structures stand uncompleted for years, and even then remain unoccupied for months. I can see no economy in these licenses, for the same sums of money could be put to better use if they were more widely distributed, and less of it would be lost; and, moreover, the costly public building in the city, while useful and necessary, is too often an object of suspicion if not of private benefit. Many a flourishing town which boasts of a \$25,000 brick opera house has a \$75,000 public building all out of sense of business or art.

One of the postmasters has done some figuring for Iowa. In that State are about 140 presidential offices. Of this number there are, say, 15 offices that have now, or are expecting soon to have, public buildings, costing from \$50,000 to \$250,000 or averaging perhaps \$150,000 each. A fair average would perhaps place the cost of the 15 public buildings at \$2,250,000. It would seem that a high one-story building, abundantly lighted and ventilated and sufficient to meet all requirements, could be erected at an average cost of \$50,000, or a total of \$750,000 for these 15 cities. This would leave a balance of \$1,500,000, which could be divided among the other 125 presidential offices, giving each one a building to cost on an average \$12,500. In some cases a \$5,000 building would answer.

Post-offices
poorly accommo-
dated.

The postal and business reasons why some departure in the matter of quarters for post-offices is necessary are too many to enumerate. It is hard to find convenient places for rent; buildings are not fireproof; they have to be rearranged and furnished oftentimes at the expense of the postmaster. In four cases out of five the Department plays the beggar, for good locations are frequently changed to bad because of expected reductions of rental, and often-

times, too, locations are selected on account of this same false economy. The lessor, who has been obliged, after driving a sharp bargain with the Government, to make a bad one, often, and very naturally, allows his property to fall into poor repair. Then a change comes, and all of the old contention has to be gone through with again. Many a new postmaster, ambitious to improve upon his predecessor and serve his party best by serving his country best, goes to great personal expense. He ought not to be asked to do this. There is no question that if the agents of the Department who have to arrange these different affairs could be consulted, their decision would be almost unanimous in favor of the smaller buildings which have been advocated so long. Of 56 postmasters who have written me upon this topic, 55 strongly urge the erection of small Government buildings. The popular call for them would be quite as strong in proportion if the proposition were properly understood. The need is small buildings, wholly for postal use, and erected under the direction of the Post-Office Department and left in the custody of it.

I think there are two or three broad public reasons why the change would be wise and patriotic. There would be something distinctive in a town to show the interest of the Government. A great deal of high-class labor would be employed; the money used would be widely scattered, and working people not usually favored would be encouraged. I would have the American flag displayed from every one of these buildings, and from every postal station of any sort in the large cities, partly because it would aid strangers in town and country to find the post-office, and partly because of the loyal sentiment which these reminders of the common interests of a common country would arouse. I intend, indeed, to ask all postmasters, whether in town or country, to display the Stars and Stripes from their offices. I have had recent cause to know of their widespread interest, and their really patriotic sentiment in the service which most nearly concerns the everyday affairs of all the people.

Fly the American flag in every town every day.

RENTALS OF PRESIDENTIAL POST-OFFICES.

The number of Presidential post-offices in effect October 1, 1891, is 3,041, classified as follows: First-class offices, 128; second-class offices, 602, and third-class offices, 2,311. One hundred and fifty-nine, or 5.2 per cent, of these offices are located in Government buildings. Four hundred and twenty-four, or 13.9 per cent, are quartered in premises which have been leased. These leases run, under existing

The Government's many landlords.

law, for periods of from one to not exceeding five years. Two thousand four hundred and fifty-eight offices, or 80.8 per cent, largely offices of the third class, are in premises or rooms for which an annual rental is paid. The aggregate amount allowed for rent, fuel, and light for the 424 leased offices is \$431,554. The aggregate amount allowed for rent, fuel, and light for the 2,458 offices is \$603,962. In addition, stations have been established in connection with the first and second class offices as follows: Ninety-seven stations at first-class offices and 3 stations at second-class offices are in premises under lease involving a total of \$157,305 for rent, fuel, and light, and 59 stations are in quarters under annual rental involving the sum of \$17,882 for rent, fuel, and light, or a total of \$175,187 for rent, fuel, and light for all stations. The aggregate amount allowed for rent, fuel, and light for all Presidential offices and stations connected therewith is \$1,210,703.

It is evident from these statements that Congress might well make provision for a uniform system for premises, including boxes, fixtures, and furniture, for Presidential post-offices. The present unjust class distinction recognized by existing law should be expunged from the statutes. There is no good reason why suitable premises, including necessary boxes, fixtures, furniture, and other postal facilities, should not be provided, and every good reason in the interest of good service why they should be provided. The Government buildings in which 159 Presidential offices are now located were erected from time to time under the direction of the Treasury Department, and very often the quarters assigned for the use of the post-offices in these buildings are not planned and arranged for a proper and rapid handling of the mails.

Injustice to
postmasters.

All boxes and fixtures in these offices are also provided by the Treasury Department. At other first and second class offices, under the terms of the leases, the owners of the premises agree to furnish boxes and fixtures. At all other offices the postmasters or patrons are required to furnish the boxes and fixtures. This wretched state of things is the source of much trouble. Provision should be made for the erection of suitable buildings, substantial, one-story structures, with ample light and ventilation, and ready access both in front and rear. The interiors should be arranged so as to give the public ample lobby room, and the employes plenty of working space, with abundant light and ventilation, and to avoid all unnecessary rehandling of mails.

PROSPECTS OF ONE-CENT POSTAGE.

In the discussion of the topic of one-cent postage last year, I gave some tables designed to show the financial status of the postal service under various developments, assumed only for the purpose of making the showing of results of certain conditions. The first table demonstrated that under conditions of receipt and expenditure for 1892, 1893, 1894, and 1895 similar to those existing in 1891, without any new legislation or any unusual elements tending to bring about increased or decreased business, the postal service would be practically self-sustaining in 1895. We have done better than this. According to the estimates just submitted, which take into account some economies easy of accomplishment, and an increase of revenue not overestimated when the large losses of last year on account of the lottery business are taken into account, the service will be self-sustaining in 1893.

When Department will be self-sustaining.

If by that time legislation could be obtained to give the Post-Office Department credit for the work which it does for other branches of the Government, and also to give it a fair rate of postage upon enormous quantities of sample copies introduced into the mails by the abuse of the exceptional privileges already accorded to publishers, and also a fair rate of postage upon paper-covered books which ought to go as third-class matter, the question of 1-cent postage might at that time be a fair one for consideration, for not only would the service be self-sustaining, but it would have a surplus fund of over \$10,000,000.

I have heretofore pointed out what 1-cent postage will cost the Government. Let me repeat it, briefly, in the light of the most recent figures. According to a careful estimate, based on the count of mail matter made in 1890, there passed through the mails during the year ended June 30, 1891, the following pieces of letter mail, to wit:

1,763,189,408 letters mailed to other post-offices, at an average of 2 cents each	\$35,263,788.12
289,553,445 drop letters for local delivery, at an average of 2 cents each.....	5,791,068.90
37,627,249 drop letters, at an average of 1 cent each....	376,272.49
Total postage	41,432,129.51

To reduce letter postage to a uniform rate of 1 cent means exactly that the Department will lose one-half of this amount of receipts. One-half would be \$20,716,064.75. But there has been a different history connected with past reductions of the rate of postage from that which would probably follow a reduction to 1 cent. For example, the

Losses by cutting postage in half.

reduction of 1883 from 3 to 2 cents was followed the succeeding year by a loss of revenue of only \$1,660,000, but there were large compensations. There was in the first place the great stimulus imparted to correspondence at the lower rate; in the second place, the stimulus given by the inducement to employ sealed letters in place of unsealed circulars, whereby the Department reaped a large profit; and, in the third place, the increase caused by the inducement to employ sealed letters in lieu of postal cards, where the profit was still larger.

It must be borne in mind all the time that there could be no such compensation in case of a reduction of letter postage to 1 cent. In fact there would be little to offset the sweeping loss besides the bare increase in correspondence brought about by the lower rate, because by a change from postal cards at 1 cent to sealed letters at 1 cent the Department would gain nothing but the cost of manufacture of the card, and this would be offset probably by the cost of carriage of the greater weight; and by a change from unsealed circulars at 1 cent to sealed letters at 1 cent there would be no gain whatever. We have therefore to face in this problem, assuming that it is ripe for solution by 1893, a clear loss to the revenue of not less than \$21,000,000 under present conditions, which, if the Department were to receive its dues in regard to the credits belonging to it, would be reduced to a deficit of from \$10,000,000 to \$11,000,000.

I have heretofore stated that 1-cent postage will be successfully demanded in time. I believe that time is not far off. It certainly ought not to be asked for so long as any deficit appears in the revenues of the postal service; and here I wish to reiterate the further statement that in my judgment it ought not to be asked for then until many improvements and extensions of the service are provided for. It would not be just and fair to a service upon which every effort has been spent for two years to make it self-sustaining, and which now promises to become so in the next fiscal year, to heap upon it, the instant the balance sheet becomes clear, a burden of millions, from which it could not recover for many years, and with the existance of which it would have to struggle year by year, and then often unsuccessfully, to obtain the appropriations absolutely required for its maintenance.

Clerks in post-offices ought to be fairly paid; they ought not to be overworked; they ought to have rooms in better buildings; letter carriers ought not to be weighted down like pack-horses; railway postal clerks should be paid for

the dangers they face daily; the great majority of post-offices ought to be better equipped; a fourth-class postmaster who receives \$100 a year can not afford to pay \$200 for fitting his office with boxes; rural free delivery, considered to be a successful experiment, and about which there can not be two opinions as to the propriety of its further extension, should be widely extended. These and other things ought to be done, but they can never be consummated so long as a deficiency in the postal revenues stares an appropriation committee in the face.

As the first step towards 1-cent postage I recommend the passage of an act to credit the Department for all the mail carried, no matter where it originates.

REDUCING FOREIGN POSTAGE RATES.

The opinions of postmasters who have very numerously expressed themselves to me on the subject, are unanimous that there is no demand among their patrons who have very extensive correspondence with persons in foreign countries for a reduction of the foreign postage rate to 2 cents; and, having argued, as I have, for a retention of the 2-cent rate on domestic letters for the present, I argue as before, that the foreign rate should not be reduced until the domestic rate is 1 cent. The judgment of the postmasters above referred to is that their patrons do not complain. What is called for is an international stamp, as hitherto pointed out. I think there can be no question that inasmuch as the ratio of persons using the foreign mail service is comparatively small, and inasmuch, too, as a reduction of the domestic rate is not likely at once to be accomplished, a reduction of the foreign rate is not to be thought of now.

Reduce domestic rate first.

IN THE NATURE OF REDUCTIONS.

The double size postal card is one form of reduced postage, and still another might be the sale, at face or postal value, of certain standard sizes of stamped envelopes of the denominations of 2 cents and upwards. Inasmuch as the Government sells a postal card at 1 cent, charging for the postage only, it would seem proper to equalize, as nearly as may be, the facilities for correspondence under seal by the sale of stamped envelopes for postage value only, to the extent of certain standard sizes and qualities, and charge as at present for the higher grades. This would be of decided advantage to the public and there would be compensations to the Government in the encouragement of the use of envelopes of a durable character properly stamped

Offer certain sizes stamped envelopes at postage rates.

THE SIMPLIFICATION OF POSTAL RATES.

Not one postmaster in ten can repeat, offhand, the table of postal rates, and not one postal official out of fifty can fix accurately the proper rate of postage for all the articles embraced under the second, third, and fourth classifications. It is literally the fact that not a day passes that the Department is not called upon specially to instruct many postmasters, either upon their voluntary request or in connection with reports coming to it from other sources. Many persons, including of course postmasters, can not see any good reason why a private mailing card, having on it a written communication, can not be sent openly in the mails for one cent, as is the case with a card bearing the Government imprint. Cases where this thing is permitted by postmasters, involving instruction and sometimes official censure, are quite frequent. In the administration of business relating to second-class matter, questions are of every day occurrence concerning the residence or nonresidence of subscribers to newspapers in the county of publication; the exact nature of the peculiar rates of postage on newspapers and periodicals at letter-carrier offices; the seeming discrimination made there against other than weekly publications; the applicability to publishers and news agents of what is known as the 4-ounce rate; the treatment of matter whose exact character can not be told positively from an examination of it, such as paper-covered books, etc.; the ascertainment of official entry of such matter into the second class, etc.

Confused class-
ifying.

Inconsisten-
cies and embar-
assments.

In the mailing of third and fourth class matter apparent inconsistencies are numerous; for example, a printed circular or advertisement on a piece of ordinary paper is third-class matter; if it be on a piece of blotting paper, and evidently for use as a blotter, it belongs to the fourth class; a sheet of paper containing a specimen of printing, is third-class matter; if it be intended as a specimen of paper, it is of the fourth class; a Christmas, Easter, or birthday card, printed on paper, is third-class matter; if it be printed on silk, satin, or any other material than paper, it is fourth-class matter; an ordinary card with a printed name on it belongs to the third class; without printing, it belongs to the fourth; printed letter, bill, and memorandum headings, and generally blanks with a trifling amount of printing on them, belong to the fourth class of matter; but insurance and other blanks with much printing, are third-class matter. Besides these, the postmaster is puzzled to determine whether matter is really in print or in writing, in all that

numerous category of cases were modern processes of reproduction, resembling handwriting or typewriting, are used, and which many times require an expert to identify.

It goes almost without saying that as to all these classes of matter a multitude of questions, embarrassing to postmasters and the public, further arise as to when full or partial prepayment of postage is proper; as to when new postage is chargeable for forwarding or returning certain kinds of matter; as to the precise manner of mailing second-class matter; and when postage stamps are to be attached to the matter in payment of postage; as to how postage due on matter after it arrives at destination is to be paid; as to permissible writing on matter of the second, third, and fourth classes; as to rates on and treatment of special-delivery matter; as to postage and fee on registered letters; and as to the manner of wrapping matter, so as to avoid taxation of higher postage thereon than the sender, properly wrapping the matter, would be charged. And it can readily be seen that the correct or incorrect determination of many of these varied cases by postmasters themselves, before the Department can have the opportunity of acting on them or even of hearing of them, may involve loss and embarrassment either to the postal revenue or to the public, besides often causing the detention of mail matter, when promptness of carriage is of vital interest to senders or addressees.

CONSOLIDATE THIRD AND FOURTH CLASS POSTAGE.

I am inclined, upon a mature consideration of all these things, to think that the time has arrived when some change tending to greater simplicity in the classification of mail matter and the rates of postage is demanded; and I do not believe that a better beginning could be made than by abolishing the distinction between third and fourth class matter and uniting them under one rate of postage. In the interest of simplicity and public convenience alone, as is demonstrated by the foregoing statement, such a union is very desirable. A right step has already been taken by Congress. By the act of July 24, 1888, the rate of postage on seeds, roots, scions, bulbs, and plants was reduced from the merchandise rate to that of the third class, in the general interest of agriculture. Why, in the general interests of manufactures and of domestic commerce, allied as these are to agriculture and all other pursuits of life, should not a further advance toward unification be made?

Small cost of
uniting the two
classes.

I beg leave to state that the mails are not greatly burdened now with articles of fourth-class matter, the rate of postage being so high as to interfere materially with the inclination of the people to patronize this branch of the postal service. In my annual report of last year a table was published which showed that out of over 3,600,000,000 pieces of paid matter of all kinds transmitted in the mails during the year, only about 37,000,000 pieces, or a trifle over 1 per cent of the whole, were fourth-class matter. Even if this number were doubled or trebled by a reduction in the rate of postage, the burden upon the postal service thereby resulting would still be light. Finally, I regret to say that in nearly every other country in the world the rates of postage on parcels is less than it is in the United States. On letters and newspapers the reverse is usually the case; and in our own country the anomaly exists that on merchandise mailed to other countries under parcel-post arrangements, the rates and conditions of transmission are much more favorable than on matter for domestic delivery. I respectfully recommend that Congress be requested to so amend the present law as to place what is now known as fourth-class matter in the third class.

NEWSPAPERS COULD BE CARRIED FREE.

What reclassification will justify.

If books alleged to be periodicals were properly classified, and sample copies of newspapers, except to a reasonable number, were classified as any other merchandise, the increased revenue would more than equal the total amount now collected from publishers for postage of newspapers. In other words, the Department would suffer no loss by carrying newspapers to actual subscribers free if it received just pay for the serials and sample copies. General merchandise in the mails pays 16 cents a pound. Books in packages of four pounds are carried at 8 cents a pound; but publishers of serials, so called, are able to ship their entire production from the Atlantic to the Pacific for 1 cent a pound.

It is stated that a single publisher in Maine sent through the mail in one year 1,600 tons of books. A number of the publishers at certain seasons of the year issue a new book every week, and some of them mail 2 tons per day. There are probably 50,000 tons of so-called serials passing through the post-offices every year at a penny a pound, causing a million of dollars per year to be added to the deficit. It is feasible from July 1, 1893, to take off the entire tax on newspapers except for city delivery, if all books of every kind

are placed on a level with other merchandise, and the postage may be reduced by consolidating fourth-class matter with the third class.

WHERE THE POSTAL MONEY COMES FROM AND HOW IT IS EXPENDED.

Only ten States and one Territory produce more revenue than is spent within their borders. New York leads, Massachusetts is next, Illinois is third, and Pennsylvania is fourth. Oklahoma is the one Territory. Grouping the States in regions, the New England States produce \$1,636,091.29 more than is spent for them; the Middle States produce \$3,857,181.23 more. No State on the Pacific Slope produces as much as is required for the maintenance of its postal service. The same is true of the Southern States. Two of the Western States and one Territory supply more than they use. The Southern States use \$3,888,973.23 more than is collected; the Western States \$6,143,677.18 more; the Pacific States \$1,871,806.04 more.

How the States
bear their part.

Without taking into account the amounts expended last year for transportation, all the increase of receipts (nearly half a million dollars) in the New England States, except \$107,000, went back into improved service. In the Middle States out of over one and a half million dollars increase all but \$10,000 went back to improve the service. In the Southern States the increase was nearly eight hundred thousand dollars (\$784,009), and all but \$15,000 went back to improve the service. In the Western States all the increased receipts, \$1,836,604, and \$677,591 in addition were spent for the benefit of the service there; and in the States on the Pacific Slope the additional receipts of \$474,644, and \$278,539 more, were spent to better the postal facilities.

THE FINANCIAL STATEMENT.

Below are statements of the revenue and expenditures of the postal service for the three fiscal years ending respectively June 30, 1889, June 30, 1890, and June 30, 1891, it being customary to restate the accounts of the two years preceding that for which each report is made, because appropriations are available for two years, and certain items which, when the accounts are first stated can only be estimated, after the lapse of that time are definitely ascertainable.

REPORT OF THE POSTMASTER-GENERAL.

Fiscal year ending June 30, 1889.

REVENUE.

1. Ordinary postal revenue.....	\$55,387,806.37
2. Receipts from money-order business	787,804.81
Gross revenue.....	56,175,611.18
Deduct amount charged to bad debts, compromise, and suspense cases	27,596.26
Remaining revenue	56,148,014.92

EXPENDITURES AND LIABILITIES.

Expenditures:

From July 1, 1888, to September 30, 1889	\$61,376,847.24
From October 1, 1889, to September 30, 1890	268,485.15
From October 1, 1890, to September 30, 1891	717,109.76
Total expenditures.....	62,362,442.15

Liabilities:

Outstanding indebtedness for various objects, as stated by Auditor.....	13,492.20
Total expenditures and liabilities for the serv- ice of the year	62,375,934.35
Cash deficiency in revenue	6,227,919.43

Fiscal year ending June 30, 1890.

REVENUE.

1. Ordinary postal revenue	\$60,057,877.68
2. Receipts from money-order business	824,220.24
Gross revenue.....	60,882,097.92
Less amount charged to bad debts, compromise, and sus- pense cases	23,314.53
Remaining revenue	60,858,783.40

EXPENDITURES AND LIABILITIES.

Expenditures:

From July 1, 1889, to September 30, 1890	\$65,930,717.11
From October 1, 1890, to September 30, 1891.....	631,105.47
Total expenditures.....	66,561,822.58

Liabilities:

Ascertained indebtedness for various objects yet un- paid	3,375.07
Total expenditures and liabilities for the serv- ice of the year	66,565,197.65
Deficiency in revenue	5,706,414.25

Fiscal year ending June 30, 1891.

REVENUE.

1. Ordinary postal revenue.....	\$65,065,293.87
2. Receipts from money-order business.....	866,491.85
Gross revenue.....	65,931,785.72
Less amount charged to bad debts, compromise and sus- pense cases.....	22,876.36
Remaining revenue.....	65,908,909.36

EXPENDITURES AND LIABILITIES.

Expenditures:

From July 1, 1890, to September 30, 1891..... \$71,662,463.39

Liabilities:

Indebtedness for various objects..... \$363,105.56

Outstanding indebtedness for various
objects (estimated)..... 43,545.60

406,651.16

Total expenditures and liabilities for the
service of the year 72,069,114.55
Cash deficiency in revenue 6,160,205.19

The foregoing exhibits deal with all cash expenditures and known liabilities for which Congress makes appropriations. No account is taken of mail transportation on aided Pacific railroads, the amount of which by law is certified to the Secretary of the Treasury.

ESTIMATES FOR THE FISCAL YEARS ENDING JUNE, 1892,
AND 1893.

The revenue during the past year showed an increase of \$5,050,125.96, or 8.29 per cent, over that of the year ending June 30, 1890. It has been estimated, however, that the loss of revenue in postages and registry fees during the past year caused by the operations of the lottery law was fully \$1,500,000. This amount added to the actual increase would make a total of \$6,550,125.96, or a little more than 10½ per cent. Exact increase
of revenue last
year.

Concerning the expenditures for the present year the appropriations authorized by Congress amount to \$77,907,222.61. These appropriations, however, were prepared upon estimates submitted about one year since, and a revision made, in the light of present information, by the officials of the Department charged with the expenditure, make it probable that there will be unexpended balances remaining after the obligations of the year shall have been satisfied. Deducting an estimated amount for such balances from the total of the appropriations would leave the estimated expenditures at \$76,755,542.10, and it is at this rate the Department is now running.

The expenditures for the fiscal year ending June 30, 1893, are taken from the table of estimates of appropriations recently submitted through the Secretary of the Treasury for the action of Congress at its ensuing session.

Upon the foregoing basis the estimates for the present and next fiscal years may be stated as follows:

REPORT OF THE POSTMASTER-GENERAL.

Fiscal year ending June 30, 1892.

Amount of ordinary postal revenue for the year ending June 30, 1891.....	\$65, 065, 293.87
Increase of 10½ per cent	6, 831, 855.85
Estimated amount of ordinary postal revenue	71, 897, 149.72
Add revenue from money-order business upon the revised estimates of the Superintendent of the Money Order System contained in letter of October 27, 1891.....	880, 000.00
Gross revenue.....	72, 777, 149.72
Expenditures for the present fiscal year as estimated above.....	76, 755, 542.10
Leaves estimated deficiency for 1892.....	3, 978, 392.38

Fiscal year ending June 30, 1893.

Estimated amount of ordinary postal revenue for the year ending June 30, 1892, as before	71, 897, 149.72
Increase of 10½ per cent	7, 549, 200.72
Estimated amount of ordinary postal revenue.....	79, 446, 350.44
Amount of estimated revenue from money-order business	890, 000.00
Gross revenue for the year.....	80, 336, 350.44
Amount of estimated expenditures shown in the table of estimates submitted by the Postmaster-General through the Secretary of the Treasury.....	80, 323, 400.51
Leaves estimated surplus of postal revenues	12, 949.93

THE PAY OF FOURTH-CLASS POSTMASTERS.

The compensation of a fourth-class postmaster is fixed, under existing law, upon the basis of all box rents collected, and of commissions upon the amount of stamps canceled and sales of waste paper, dead newspapers, printed matter, and twine sold, at the rate of 100 per cent per quarter on the first \$50; 60 per cent on the next \$100; 50 per cent on the next \$200, and 40 per cent on all the balance; limited, however, to not exceeding \$250 per quarter, exclusive of commissions on money-order business. The maximum annual compensation which a fourth-class postmaster can therefore receive under existing law, exclusive of commissions on money-order business, is \$1,000.

Postmasters of over 40,000 offices get all the revenue.

At the close of the last fiscal year there were 64,329 post-offices. At 44,263 of these the receipts which accrue were absorbed, or more than absorbed, by the postmasters' pay. In other words, the compensation to postmasters includes all the receipts from more than two-thirds of all the post-offices. Another large percentage of offices should be added

to this number, where the compensation of the postmaster, the cost of the mail-messenger service, and the allowance for separating labor more than include the receipts. The number of post-offices that are conducted at a profit is therefore very small. The following statement, showing the total number of offices, the number where the receipts are absorbed for compensation to postmasters, and the per cent of offices that do not return a revenue, grouped by regions, is submitted:

Section.	Total number of offices.	Total number of offices where receipts are absorbed in compensation to postmasters.	Percentage of offices that turn in no revenue to the Government.
New England States.....	3,712	1,682	.45
Middle States.....	10,254	6,514	.63
Southern States.....	23,796	19,465	.81
Western States.....	21,381	13,435	.62
Pacific slope.....	5,169	3,158	.61
Alaska.....	17	9	.53
Total.....	64,329	44,263	.68

It would seem ludicrous, then, unless conditions were radically to change, that there should be any general demand for increased compensation among public servants who get everything there is; and it seems a little ungenerous that public officers who have eagerly sought place and succeeded against the candidacies of perhaps half a dozen others, or who, meeting with no opposition in their candidacies, accept place in many instances on the implied supposition that they shall never exert themselves to fill it, except by deputy, should complain about their pay. Until the importance of the fourth-class postmaster is raised, and additional work or direction or responsibility entitles him, on business principles, to larger pay, any "movement" to relieve him can only fail. Recently the thrifty interest of an attorney or an editor of a postal journal has succeeded in stirring up a little diversion on the part of these officials. The effort which I refer to has been mainly observed in the distribution of circulars pushing the circulation of the postal journal just referred to, and in the distribution, to an extent more or less wide, of the following circular to certain postmasters, presumably in many of the counties in different parts of the country.

How the agitation is stimulated.

[Form] No. 4.]

"Fair pay for good and efficient work is simple justice."

MY BROTHER POSTMASTER: We must now put in some good work towards securing the passage of a bill in Congress for increased compensation. As you know, ———— has taken up a serious and

aggressive fight in our behalf, and the first move is to call a convention of all postmasters of the fourth grade in every county of the United States. I have been asked to call the meeting for this county for Wednesday, October 14th next, at noon of that day, to meet at ——— in the town of ———.

Among the questions to be considered will be—

First. The provisions required to be inserted in the proposed bill that shall make equitable provision for increased compensation.

Second. The selection of a delegate and alternate to attend the State convention to be held at ———, ———, on the 27th day of October next.

Third. The arranging of details looking to the proper method of circulating a petition among our home patrons to secure signatures urging Congress to do justice to the fourth-class postmaster.

The unanimity with which these county conventions are attended will attest the disposition of postmasters as to whether increased compensation is desired. With full attendance and an earnest disposition we can surely secure better remuneration before the adjournment of the next Congress. If you do not interest yourself how can you expect any other man to do so?

Please write me and state whether your presence may be depended upon.

Fraternally, yours,

— — — — —, P. M.

The Department is well informed as to all postal movements, important and unimportant; but it is doubtful if accounts of more than a dozen county conventions have been received, and it is certain that almost every one of these has been a failure. In several instances a few fourth-class postmasters, induced to meet at a certain place by the call of some interested party, did not "meet" at all, but went to the designated point only to find that they had been deceived, and they were left to wander about aimlessly until the next train left for home. Where meetings have been held a formality of consequence seems to have been to indorse the administration of the present Postmaster-General, and to send to the editor or the attorney who had caused the meeting to be called his own resolutions asking the aforesaid Postmaster-General to consider the question of increased pay, and complimenting his own efforts in behalf of himself.

Increased compensation will come when justified.

The fourth-class postmaster is deserving of far better compensation and far better consideration than he receives. I have tried to help him in the visitations of the county-seat postmasters. I purpose to extend that same advantage another year, if the plan of supervisors is provided for by Congress; some other way probably if it is not. The direct compensation of the fourth-class postmaster, however, can only be brought about as the result of a business proposition. In order to get more pay he must deserve it, either

because he does more work or because he does a greater variety of it. I would give him a chance to do both. I would gradually but surely extend to him the management of the rural free delivery, and still more gradually, but none the less surely, the extension of the telegraph and telephone service into the country and the transfer of the postal deposits.

To do all this work he would necessarily be a more useful man, and, being always capable, he would be glad to have a chance to become a better postal man; and, having all this extra work to do, and drawing, as formerly, a certain equitable part of the revenue of the Department for his services, his pay would increase in a natural and thoroughly business-like way. He would be doing better work and doing more of it. His condition would be improved and his position dignified. He would take an interest in his work. The standard required of candidates for vacancies would be higher, and the improvement upon the whole system, by the certain but almost imperceptible improvement in numberless minute details, would be incalculable.

The free-delivery experiment is on trial in 46 communities. It shows all signs of netting to the Department \$3,812.54 in a year at all the offices. It shows all signs, too, as a careful calculation, printed as an appendix, shows, of increasing the pay of 38 of the postmasters a total of \$2,920.66. The salaries of the postmasters at 12 out of 19 Presidential offices where the free-delivery experiment is on trial will evidently be increased \$1,600 in the aggregate. But the compensation of the fourth-class postmasters will show an increase, smaller, but in due proportion, and an increase just the same; and it will be due to the added business of their offices. I wish that every postmaster and every patron of the mails in the country might know these things, so that perfect service and increased pay might come in a regular way through enlargements and extensions of the system.

The pay can be increased by free delivery.

PACKAGES BY MAIL.

The English Government has again urgently asked, through Sir Julian Pauncefoot, the British minister, for a parcels post between Great Britain and the United States. The German Government, through Mr. Sachse, has also urged the privilege of greater mail facilities for business intercourse between the two countries. The answer to these and other countries has uniformly been that under existing legislation a full parcels post could not be instituted, and that, while only a limited and unsatisfactory par-

Overtures from foreign offices.

cels post existed in this country, it would probably be impossible to expect legislation to provide a proper parcels post with foreign nations.

But I notice each year a steady discussion in the newspapers of the need of an improved method of transporting packages by mail, and it may be mentioned, too, as an evidence of the popular interest in this subject, and of the somewhat prevalent demand for this enlargement of the service, that of the 43 postmasters who criticised the last report, 33 expressed themselves in favor of the full parcels post, and 10 as being opposed to it, some of the latter being probably interested express agents. Free-delivery extension, postal telegraph, postal telephone, postal depositories, tubular post, and 1-cent postage, ought, perhaps, to precede it.

Department at
disadvantage.

The present parcels post of 4 pounds does not pay, because the short hauls are almost invariably taken by the express companies, and the long and expensive hauls, upon which money is lost, are left for the Department. A New England business house has a contract with an express company to carry 25,000 or more packages of third-class matter, weighing 30 ounces each, at 13 cents per package, as I am informed; and after the express company selects such as it cares to handle, the Department is obliged to carry the balance, at 15 cents per package, to be sure; but this is a much lower figure and the hauls are unprofitable. The benefit of the full parcels post (and the reason why it is so extensively demanded) is that the post reaches thousands of localities where the express companies do not find it profitable to go.

There is no mistaking the fact that the parcels post is a success wherever it is in operation, and that the vast majority of people greatly appreciate it, and to deny it to millions of people in this country because it is charged that it will benefit less than a score of tradesmen is a great injustice to the people at large. This objection is even more trivial in the light of the evidence of traders in other countries. In point of fact there are but four strong objections to the parcels post, and they are the four great express companies, who would be just as well off with an 8 or 11 pound parcel post if the heavy freight of the Executive Departments and the immense packages of bogus serial books that are now thrown upon the mails were shut out and turned over to the express companies, where they belong.

THE PAST.

Thirty-eight years ago all the receipts of the Post-Office Department of the United States did not equal the receipts

to-day of the post-office in one city. In 1853 the entire receipts amounted to \$5,940,725, and to-day the revenue at New York city alone is \$6,386,520.95.

"Before the war" is an epoch in our history that is easily remembered. In 1861 the entire revenue of the Department was \$8,349,296, and the expenditures were \$13,606,759. Somo compari-
sons With 28,586 post-offices then, the deficiency was over five and a quarter millions of dollars, or nearly as much as it was last year. To-day, with reduced postage and more than twice as many post-offices and 535 per cent more miles of mail service, and an expenditure of \$72,069,114.55, the Department produces all it needs without practically increasing the deficit of before the war. Were the shortage to continue in the same ratio to the receipts as in 1861, to-day it would be over forty-one millions instead of six millions. In 1900, upon the present basis of growth, the receipts of the Department will be over one hundred and fifty-five millions.

THE FUTURE.

The future of the postal service is very bright. The widening interest in postal subjects and the study of them by postmasters, newspaper men, and writers on economic subjects generally, and the deepening concern of the public at large are encouraging signs. The Post-Office Department is the one common meeting ground of all the people. It seems to me that there is enough in it to be done to be worthy the careful thought of the best men in the nation. The outcome of all the discussion and experimenting now going on will surely be fruitful of good. The stated and frequent conferences of postmasters, inspectors, and railway mail superintendents, and the emulation and incentive to advancement within the service, on the merit basis alone, establish a new system that will yield far-reaching results. The steady, closer, every-day watch and care of all the post-offices and the people's mails by the executive office, and the employment of supervisors in some form to assist, will surely tell.

A further development of all the old plans that are good and the introduction of new measures, such as pneumatic-tube service in large cities, the telegraph and telephone, and postal depositaries, the extension of the money order and the improvement of the registry system, and a gradual plan of free delivery for the smaller towns and villages spreading over adjacent rural districts, will almost entirely reconstruct the service and quadruple its beneficent influ- Development
of old and intro-
duction of new
measures.

REPORT OF THE POSTMASTER-GENERAL.

as a servant of the people. It will help to settle the inhabited portions of the land and promote the contentment of all who by means of the post will come into closer touch with kith and kin and the activities of life.

The reduced rate of expenditure during the past five months of this fiscal year determines what is possible for the remainder of the year, and the excellent prospect of making the receipts and expenditures of next year balance, for which the estimates required by Congress have been submitted, will encourage generous consideration of the various postal measures deterred by past deficits.

The toilers here in the Department and those outside of it, scattered over the land, whose good work I have detailed in the preceding pages, are resolved and steadfast in their purpose to do their best, and I shall help them to the utmost.

This year and the next ought to be great years in postal work.

Very respectfully, your obedient servant,

JOHN WANAMAKER,
Postmaster-General.

PAPERS

ACCOMPANYING

THE REPORT OF THE POSTMASTER-GENERAL.

REPORT OF FIRST ASSISTANT POSTMASTER-GENERAL.

POST-OFFICE DEPARTMENT,
OFFICE FIRST ASSISTANT POSTMASTER-GENERAL,
Washington, D. C., November 26, 1891.

SIR: I have the honor to submit the following report of the work of this Bureau for the fiscal year ended June 30, 1891:

APPOINTMENT DIVISION.

Post-offices established and discontinued, postmasters appointed, and the increase or decrease, as compared with the previous year.

Post-offices.	June 30, 1890.	June 30, 1891.	Increase.	Decrease.
Post-offices established during the year.....	4, 427	3, 420	.....	1, 007
Post-offices discontinued during the year.....	1, 025	1, 492	467	.....
Net increase over previous year.....	3, 402	1, 928	.....	1, 474
Whole number of post-offices.....	62, 401	64, 329	1, 928	.....
Number of Presidential.....	2, 738	2, 942	204	.....
Number of fourth class.....	59, 663	61, 387	1, 724	.....

Appointments during the year.

Appointments.	June 30, 1890.	June 30, 1891.	Increase.	Decrease.
On resignations and expirations of term.....	8, 910	7, 570	.....	1, 349
On removals.....	6, 569	1, 429	.....	5, 140
On offices becoming Presidential.....	134	241	107	.....
On deaths of postmasters.....	673	658	.....	15
On establishment of post-offices.....	4, 427	3, 420	.....	1, 007
Total.....	20, 722	13, 318	107	7, 511

Total appointments during the year.....	13, 318
Total offices discontinued.....	1, 492
Number of names and sites changed.....	1, 414
Total cases acted upon.....	10, 224

The number of new offices established and the increase in the number of post-offices, arranged by sections, States, and Territories, were as follows:

States and Territories.	Estab-lished.	Increase.
<i>New England States.</i>		
Maine.....	33	28
New Hampshire.....	15	8
Vermont.....	12	11
Massachusetts.....	15	9
Rhode Island.....	4	4
Connecticut.....	5	2
Total	82	62
<i>Middle States.</i>		
New York.....	93	79
New Jersey.....	20	18
Delaware.....	3	.....
Maryland.....	40	25
Pennsylvania.....	154	114
District of Columbia.....	1	.....
Total	311	227
<i>States and Territories on Pacific Slope.</i>		
Oregon.....	81	45
California.....	82	39
Nevada.....	12	4
Washington.....	96	63
Alaska.....	1	.....
Total	272	154
<i>Southern States, Oklahoma, and Indian Territory.</i>		
Virginia.....	129	71
West Virginia.....	101	62
North Carolina.....	167	103
South Carolina.....	86	54
Georgia.....	173	99
Florida.....	71	25
Alabama.....	176	86
Mississippi.....	97	52
Louisiana.....	67	31
Texas.....	204	101
Arkansas.....	120	52
Missouri.....	127	86
Tennessee.....	147	97
Kentucky.....	186	139
Oklahoma.....	42	27
Indian Territory.....	52	22
Total	1,949	1,100
<i>West and Northwest States and Territories.</i>		
Ohio.....	120	83
Indiana.....	59	24
Michigan.....	65	44
Illinois.....	67	48
Wisconsin.....	62	48
Iowa.....	48	22
Minnesota.....	57	25
Nebraska.....	51	29
Colorado.....	43	8
North Dakota.....	17	9
New Mexico.....	22	9
Montana.....	52	21
Wyoming.....	26	19
Idaho.....	21	10
Utah.....	13	4
Arizona.....	11	.....
South Dakota.....	32	.....
Kansas.....	40	.....
Total	806	463

The greatest increase in the number of post-offices in any of the States for the year was 130 in Kentucky. In Pennsylvania, the increase was

114; North Carolina, 103; and Texas, 101. The largest increase for the previous year was 215, in Pennsylvania.

Arizona shows a decrease of 2; District of Columbia, 1; Kansas, 24; and South Dakota, 1, since the last annual report.

In each of eleven States there were upwards of 2,000 offices in operation on June 30, as follows:

Pennsylvania	4,684	Illinois	2,449
New York	3,476	Tennessee	2,370
Ohio	3,156	Texas	2,349
Virginia	2,777	Kentucky	2,344
North Carolina	2,614	Indiana	2,090
Missouri	2,475		

In ten of the States there are 100 or more Presidential offices, as follows:

New York	256	Iowa	147
Pennsylvania	216	Michigan	147
Illinois	209	Kansas	120
Ohio	167	Indiana	102
Massachusetts	147	Missouri	102

REPORT OF SECOND ASSISTANT POSTMASTER-GENERAL.

POST-OFFICE DEPARTMENT.

OFFICE OF SECOND ASSISTANT POSTMASTER-GENERAL, Washington, November 10, 1891.

SIR: I have the honor to submit the following report of the office of the Second Assistant Postmaster-General for the year ended June 30, 1891:

MAIL SERVICE IN GENERAL.

The annual rate of expenditure for mail transportation on June 30, 1891, was—

For 16,410 star routes, aggregating 237,845.53 miles in length	\$5,390,206.39½
For 124 steamboat routes, aggregating 9,426.67 miles in length	443,853.94
For 6,918 mail-messenger routes, aggregating 5,421.95 miles in length	1,083,792.25
For 2,539 special-office routes, aggregating 26,815.11 miles in length	47,926.26
For 2,261 railroad routes, aggregating 159,518 miles in length	22,398,868.66
For 198 railway post-office car routes, aggregating 34,360.37 miles in length	2,784,845.16
For 6,032 railway post-office clerks	6,069,074.00
For mail equipments	331,018.49
For necessary and special facilities on trunk lines	295,421.78

Total inland mail service

Foreign mail service:

Aggregate cost

Less for intermediary services to foreign countries

599,214.66

Total

Summary of all classes of inland mail service in operation June 30, 1891:

Number of routes, 28,252; length of routes, 439,027.26 miles; annual rate of expenditure, \$38,845,066.93½; number of miles traveled per

annum, 346,266,445.41; rate of cost per mile traveled, 11.21 cents; rate of cost per mile of length, \$88.47; average number of trips per week, 7.58; an increase of 1.147, or 4.23 per cent, in the number of routes; of 11,036.54 miles, or 2.57 per cent, in the length of routes; of \$2,151,629.86½, or 5.86 per cent, in the annual rate of expenditure; of 18,856,952.39, or 5.75, in the number of miles traveled per annum. While the rate of cost per mile of annual travel remains about the same, the rate of cost per mile of length shows an increase of \$2.74 per mile, or 3.19 per cent, and an increase of 0.23, or 3.12 per cent, in the average number of trips per week.

THE RAILWAY MAIL SERVICE.

RAILWAY POST-OFFICE CARS.

The annual rate of expenditure for full railway post-office cars in service on June 30, 1891, was \$2,784,845.16.

The number of routes on which railway post-office cars were used was 198; the length of routes, 34,360.37 miles.

The appropriation for the last fiscal year was \$2,510,000; the sum expended, as shown by the Auditor's account, was \$2,450,819.13.

The annual rate of expenditure for railway post-office cars in the third contract section on June 20, 1891, was \$669,487.21.

The result of the regular quadrennial readjustment of the pay for service in said section, by orders to September 30, 1891, was an increase of \$7,735.09, making the annual rate of expenditure in said section on September 30, 1891, \$677,222.30.

The total annual rate of expenditure was—

July 1, 1891.....	\$2,781,423.81
August 31, 1891.....	2,803,537.08
September 30, 1891.....	2,806,582.08

The appropriation for the current fiscal year is \$2,731,000.

The amount estimated as necessary for the fiscal year ending June 30, 1893, is \$2,836,000, being \$105,000, or 3.84 per cent, more than the appropriation for the current year.

RAILWAY POST-OFFICE CLERKS.

The annual rate of expenditure for railway post-office clerks on June 30, 1891, was \$6,069,074.

The number of clerks was 6,032.

The appropriation for the last fiscal year was \$5,910,000; the sum expended was \$5,904,380.90, leaving an unexpended balance of \$5,619.10.

The appropriation for the current fiscal year is \$6,353,000.

The amount estimated as necessary for the fiscal year ending June 30, 1893, is \$6,631,000, being \$278,000 or 4.37 per cent more than the appropriation for the current fiscal year.

Under the order of a year ago, which assigned the direction of the Railway Mail Service directly to this bureau, much attention has been given to its workings. The General Superintendent now holds daily conference with this office concerning the details of its management, and all of the expenditures from the regular appropriations are now passed upon personally by the Second Assistant Postmaster-General.

The annual report of the General Superintendent of the Railway Mail Service, addressed to me, enters very fully into the details of this the most important of all the branches of the mail service, and is accompanied with data and statistical tables that must be carefully gone over to enable one to fully realize the vastness of the traveling post-office system, which has been so successful in placing the smallest rural post-office that is within the sound of the whistle of the locomotive upon a parity with the service in the largest towns and cities in the land.

While in direct charge of the Railway Mail Service, as its General Superintendent, I had constant opportunity for studying the magnitude of the labors devolving upon the management of its corps of more than 6,000 clerks, whose duties are spread over nearly 150,000 miles of railroad; and now after more than a year's association with this bureau, which has the direction of all means of transportation, both upon land and water, I am more than ever strengthened in the belief expressed in former reports, that the greatest developement of the postal service in this country in the future will be through the organization of its Railway Mail Service.

Local post-offices in the great mailing centers are overcrowded, and they are likely to become more and more so. New buildings provide mainly for the needs of the present, and can not be expected to take care of the growth that is constant, so that the opportunities for the expansion of distribution instead of increasing with the natural growth of the mails, tend towards contraction, and instead of making "finer" distributions, the largest post-offices in the country are forced to make up their outgoing mails more and more by States and railway post-office lines, depending upon the strong arm of the Railway Mail Service to effect in the traveling post-office a large extent of distribution and advancement of mail matter that, were the conditions different, it would be possible to accomplish in the initial post-office. That the Railway Mail Service is enabled to accomplish so much with so few errors, must be attributed partially to the discipline of its organization, coupled with the character of its force of clerks, and it is in this respect also that it is likely to maintain more strength than would be acquired from an equal number of local post-office clerks.

The life of a railway postal clerk carries with it risks; at the same time the employment is very similar to that of railway train employés. It approaches closely to an outdoor life, and men develop and retain more vigor than those employed entirely within doors. There is also a measure of fascination about railroad service, and the pride and ambition of the men are constantly enlisted in striving to succeed and establish records that will merit promotion, and call forth pleasant and complimentary remarks from the public and the railroad employés along their respective routes who have means of knowing and who keep in view the standing of those who are the custodians of the United States mails.

The greatest difficulty in the way of the future increased usefulness of the Railway Mail Service, in my judgment, lies, however, in the insufficiency of its present organization and the necessity that exists for so modifying present statutes as shall permit of its enlargement. The organization of 1891, is precisely that of 1882, and attention is invited to the following table:

Comparative statement of service performed by railway postal clerks, 1891 over 1882.

Fiscal year ended—	Miles of rail-road over which railway postal clerks run.	Annual miles of service by postal clerks.	Number of clerks in the service.	Number of pieces of mail handled en route.
June 30, 1891.....	140,737	141,194,221	6,532	8,564,232,562
June 30, 1882.....	87,865	75,741,438	3,570	3,448,195,273
Increase, 1891 over 1882.....	52,872	65,452,783	2,462	5,116,037,290
Increase, per cent.....	60.2	86.4	69.6	148.3

The organization ten years ago was all that the service then needed, but for more than five years the strain upon it has been getting greater and greater; and were it not that the heads of the organization are the men who have gone through every stage of promotion, and are, therefore, familiar with all the details of mail manipulation and transportation, it would not be possible to acquire anything like the results that are demanded by the Department in connection with a fairly good mail service. The urgency for a new organization formula is not so much to provide for to-day as it is to enable the Railway Mail Service to keep up with its past efforts to accomplish a steadily improved service in connection with the growth of mails, which never ceases.

The calling of a railway postal clerk is a manly one, as well as one of trust. He is the custodian of that which is both sacred and valuable; and strengthening the organization will make it possible to render the service more and more complete and reliable, which the public generally, have so deep an interest in. Bearing upon the subject, I desire to renew my recommendation of last year in favor of reorganization as embodied in House bill No. 8299 of the Fifty-first Congress. I also approve of the modification recommended by the General Superintendent placing the maximum salary of class 3 at \$1,200 per annum instead of \$1,100 per annum. I also renew my recommendation concerning the making of provision for the family in case of death occasioned by accident. The plan that is favored limits the amount and is really nothing more than we are now permitted to allow those injured while on duty. Thirteen clerks were killed at their posts in the last fiscal year.

RECAPITULATION.

The total expenditure for mail bags and mail-bag catchers, with their appurtenances and repairs, during the year ended June 30, 1891, was \$274,732.51.

The total expenditure for mail locks and keys, including repair of same, was \$49,785.98.

Comparison with the last annual report shows for the fiscal year ended June 30, 1891, an increase in the expenditure for mail bags, mail-bag catchers, etc., of \$51,875.03½, and an increase in the expenditure for mail locks and keys of \$35,007.35.

The appropriation for the last fiscal year for mail bags, mail-bag catchers, etc., was \$275,000; the sum expended was \$274,732.51, leaving an unexpended balance of \$267.49.

The appropriation for mail locks and keys, etc., was \$50,000; the sum expended \$49,785.98, leaving an unexpended balance of \$214.02.

The appropriation for the mail-bag repair shop was \$6,500, which was all expended.

The appropriation for the current fiscal year for mail bags, mail-bag catchers, etc., is \$260,000; for mail locks and keys, \$45,000; for repair shop for mail equipments, \$6,500.

The amount estimated as necessary for the fiscal year ending June 30, 1893, for mail bags and mail-bag catchers, etc., is \$260,000; for mail locks, keys, etc., \$40,000; for repair shop, \$6,500.

REPORT OF THE GENERAL SUPERINTENDENT OF RAILWAY MAIL SERVICE.

POST-OFFICE DEPARTMENT,
OFFICE OF THE GENERAL SUPERINTENDENT
OF RAILWAY MAIL SERVICE,
Washington, D. C., October 16, 1891.

SIR: I have the honor to hand you herewith my annual report of the operations of this service for the fiscal year ended June 30, 1891, of which the following is a summary:

EXTENT OF THE SERVICE.

At the close of the fiscal year the mails were carried on 159,518 miles of railroad in the United States. Postal clerks were employed in the distribution of the mails on 140,736.74; service on the remainder, namely, 18,781.26 miles, having been performed by means of closed pouches carried by lines upon which no distribution is made by postal clerks.

* * * * *

EXTENT OF THE RAILWAY MAIL SERVICE AND FORCE EMPLOYED.

At the close of the fiscal year under review there were 1,073 railway post-office lines in operation, aggregating, as previously stated, 140,736.74 miles of route, on which postal clerks were employed in the separation and distribution of the mails. There were also 37 steamboat lines, upon which 51 postal clerks were employed. There were engaged in the performance of the duty of handling and distributing the mails in transit on railroad routes 5,514, and on steamboat routes 51 railway postal clerks, making a total of 5,565 clerks at work on lines. While engaged in the separation and distribution of the mails the postal clerks assigned to railroad lines traveled during the year (in crews) 139,435,330 miles, and those employed on steamboats 1,758,841 miles, and while en route they distributed 8,546,370,090 pieces of ordinary mail (exclusive of mail redistributed for immediate city delivery, of which there were 253,813,725 pieces), and receipted for, recorded, protected, and distributed 16,671,914 registered packages and cases, and 1,210,559 through registered pouches and inner registered sacks.

On the 1st of July, 1890, there were in operation 154,779.35 miles of railroad over which mail trains were run, to which were added, during the year, 4,738.65 miles of new service, being an increase of 3.06 per cent. The lines upon which service was performed by postal clerks show an increase of 3,172.62 miles, or 2.31 per cent.

The mileage of lines covered by closed-pouch service was increased from 17,215.23 miles at the close of the fiscal year 1890 to 18,781.26 miles on June 30, 1891, being an increase of 1,566.03 miles, or 9.09 per

cent. The annual mileage of this class of service for 1890 was 19,648,763 miles; for 1891, 21,124,102 miles, being an increase of 1,475,339 miles, or 7.5 per cent. The mails in transit over these lines are looked after by transfer clerks at initial points, railroad employes in transit, and transfer clerks at terminal points of the routes. The number of closed pouches exchanged daily increased from 17,549 for the year 1890 to 18,696 in 1891, being a daily increase of 1,147, or 6.5 per cent.

On June 30, 1890, there were 5,836 clerks in the service, and on the corresponding date of 1891 there were 6,032 on the rolls, being an increase of 196 men, or 3.36 per cent., while the record of annual mileage shows an increase of 6,713,837 miles, or 5 per cent., in distance traveled in the performance of duty, and 698,814,462 pieces, or 8.9 per cent. in the quantity of mail matter distributed. The number of clerks employed on steamboat lines remained about the same as for the previous year, or, to be more exact, 52 clerks, including 1 acting clerk, were in the service on these lines June 30, 1890, and 51 regular postal clerks on June 30, 1891. There was a decrease of 2 in the number of steamboat lines, 981.10 in the number of miles of route run by clerks, and 2 in the number of mail apartments.

The following exhibit shows, in concise form, the number of clerks engaged in each class of work, and the increase over 1890:

Fiscal year ended—	Employed on railroad lines.	Employed on steamboat lines.	Detailed to transfer duty.	Detailed to office duty.	Total.
June 30, 1891.....	5,514	51	346	221	6,032
June 30, 1890.....	5,314	51	249	222	5,836
Increase.....	200	.....	*3	*1	196

* Decrease.

QUANTITY OF MAIL HANDLED.

During the year under review 8,564,252,563 pieces of all classes of mail matter were handled, and 2,042,049 errors checked by those opening the packages for redistribution on connecting lines or for delivery at destination, showing that 4,194 pieces were correctly distributed to each error made.

REGISTERED MATTER HANDLED.

It appears from the table lettered "E" that 16,576,293 registered packages and cases, 795,554 through registered pouches, and 342,054 inner registered sacks were distributed during the fiscal year ended June 30, 1890, while for the succeeding fiscal year 16,671,914 registered packages and cases, 838,326 through registered pouches and cases, and 372,233 inner registered sacks were distributed, making the increase 95,621 in the number of registered packages and cases, 42,772 in the number of through registered pouches, and 29,579 in the number of inner registered sacks, making the total increase under this heading 167,972 pouches, cases, and sacks.

CASUALTIES.

It appears from the detailed report hereto appended that an unusual number of wrecks of railway post-office cars occurred during the year.

The total number reported was 319. In these wrecks 13 were killed, namely:

J. A. Tilford, Chicago and Louisville railway post-office, leg broken and chest crushed in wreck near Bedford, Ind., August 3; died August 5, 1890.

A. A. Greenwald, Pottsville and Philadelphia railway post-office, killed in wreck near Shoemakersville, Pa., September 19, 1890.

C. L. Dolgen, a substitute clerk in the Cincinnati and Chattanooga railway post-office, killed in wreck in tunnel near Sloan's Valley, Ky., October 21, 1890.

W. T. McLean, Toledo and Bowerston railway post-office, fatally injured in wreck at Navarre, Ohio, March 12, and died March 14, 1891.

F. F. Clement, F. J. Nugent, J. J. Bowerfind, James McKinley, Charles Hamill, and C. L. McDowell, acting clerk, New York and Chicago railway post-office, killed in wreck at Kipton, Ohio, April 18, 1891.

Charles A. Spurgeon, San Francisco and Los Angeles railway post-office, killed in wreck near Port Costa, Cal., June 15, 1891.

T. I. Fraser, Cairo and New Orleans railway post-office, fatally injured in collision at Sauve, La., June 19; died June 20, 1891.

S. G. Burdett, Baltimore and Grafton railway post-office, acting clerk, killed in collision near Waring Station, Md., April 28, 1891.

In addition to the fatalities mentioned above, 68 clerks were seriously and 84 slightly injured. Seventy-four of the number injured were so badly disabled as to necessitate the employment of acting clerks for various periods to keep up the runs. The sum of \$12,699.10 was paid such acting clerks for the services rendered by them during the fiscal year. It was also necessary to employ 13 acting clerks in place of a like number of clerks who had been injured while in the performance of duty prior to the 1st of July, 1890, and who were unable to resume service at the commencement of the year. The amount paid these acting clerks was \$3,590.85, making the total amount of the expenditure on this account \$16,289.95 for the fiscal year ended June 30, 1891.

Comparing this statement with those embraced in the previous reports made by this office I find that the number of clerks killed and injured during the fiscal year ended June 30, 1891, was much greater than during any similar period since the organization of this service. In the lamentable accident which occurred on the Lake Shore and Michigan Southern Railway at Kipton, Ohio, April 18, 1891, 6 clerks, employed in the New York and Chicago railway post-office, were killed while in the discharge of their official duties; to this one accident must be attributed nearly one-half of the deaths that occurred from violent and unnatural causes during the period under consideration.

Realizing the hazardous character of the service, the Department has, through the division superintendents, observed closely the building of all railway post-offices, to the end that the maximum resisting power and carrying capacity might be secured, and with the hope that superior construction would tend to reduce to the minimum fatalities which are liable to result from collisions and derailments; that the object sought has been partially accomplished is evidenced in the number of serious derailments that have occurred to postal cars during the past year without injury to the clerks or the mails being conveyed in them.

Following the Kipton disaster measures were taken, at your instance, to ascertain whether any of the cars in service had depreciated so much as to render their further use unsafe, and whether they were

provided with improved platforms, couplers, buffers, trucks, lights, and heating facilities equal in all respects to the equipment used by the same companies for the transportation of first-class passengers.

After making careful inspection of the postal-cars in their respective divisions, the superintendents reported that in most cases they were found to be in first-class condition, and provided with all the improved safety appliances supplied the best passenger coaches used upon the same lines; where this was not the case, requests were made upon the companies concerned to provide better cars at the earliest moment possible, and it is a pleasure to state that these requests were honored immediately. Simultaneously with the issuance of the order for a general inspection of postal cars a committee consisting of three superintendents of this service was created to formulate

PROVISION IN CASE OF DEATH

for the dependents of clerks who may be killed while on duty, and I respectfully recommend that the Postmaster-General be authorized to use the fund arising from deductions because of the failure of clerks in the Railway Mail Service to perform duty and for other causes in paying to the widow and minor children of each permanent railway postal clerk killed while on duty the sum of \$1,000. In the event of there not being a sufficient amount arising from deductions, the Postmaster-General shall be authorized to make up the deficiency from the regular appropriation for the payment of railway postal clerks.

PROVISION IN CASE OF INJURY.

It is the custom of the Department to grant leaves of absence with pay to clerks who are injured while on duty; these leaves are for stated periods and may in the aggregate cover a year, unless the injured clerk recovers and returns to duty before the expiration of that period. If the disability continues beyond that time the Department is, under existing laws, compelled to retire the clerk from the service. This regulation should, in my opinion, be continued until some more extended and equitable provision is made by Congress for this deserving class of public servants.

The policy which obtains of providing for disabled, infirm, and aged clerks by assigning them to duty on routes of minor importance is dictated by philanthropy and is worthy of mankind; but it stands as a barrier to the fullest development of the service.

These lines of minor importance are simply feeders for the great railway post-offices that span the country, connecting commercial centers with each other and with the intermediate territory tributary to them; their distribution is rudimentary and local in its nature—just such as may be intrusted to new appointees with the certainty that the minimum instead of the maximum of bad service will result from their lack of knowledge of the work devolving upon them. These lines should be used as kindergartens and common schools, through which the new appointees should pass, and from which they should graduate with honors before being assigned to duty in railway post-offices of the first or second class; but this policy can not be enforced so long as the present method of providing for the disabled and infirm is continued, nor can the service as a whole approach the maximum of usefulness until all probationers begin their official life in the primary department of

the service; but this can not be done if that department is filled with the worthy class of clerks who have been disabled by accidents, broken down by hard work on important lines, or become incapacitated for further service by reason of age. It, therefore, becomes necessary to consider what can be done to advance the interests of the service without ignoring the future of these men.

Public sentiment in the main is, and always has been, opposed to pensioning the civil servants of the Government. Past movements in this direction have been fruitless. We have no reason to believe that this sentiment will be revolutionized in the future. Then why not leave the field of debate, beaten hard by nations older than ours, and travel to some extent in the paths they have found passable; this would seem to be the most feasible course to pursue.

In my opinion the best interests of the service, the clerks, and the public can be secured by such legislation as will create a law to be known as

* * * * *

CONCLUSION.

It is gratifying to be able to state that the officers of the service and the clerks, as a rule, have devoted their energies and time to its improvement, and that in distribution, discipline, and morals it has reached a higher standard than ever before. This may be attributed to the fact that the service is being conducted on a business basis—the best clerks being given the best places, and marked ability being rewarded by promotion whenever opportunities occur. Returning very sincere thanks to both officers and men for their hearty coöperation in the labors necessary to the advancement of the service, I have the honor to be,

Very respectfully,

JAMES E. WHITE,
General Superintendent.

Hon. J. LOWRIE BELL,
Second Assistant Postmaster-General.

* * * * *

Recapitulation of casualties in the Railway Mail Service from 1875 to 1891.

Year ended June 30—	Total number of clerks.	Number of casualties.	Clerks killed.	Clerks seriously injured.	Clerks slightly injured.
1875	2,238	(*)	1	(*)	(*)
1876	2,415	(*)	1	(*)	(*)
1877	2,500	27	2	10	4
1878	2,608	36	2	15	3
1879	2,609	35	3	14	13
1880	2,946	26	.....	14	15
1881	3,177	62	7	15	22
1882	3,570	83	3	16	20
1883	3,855	114	1	35	42
1884	3,963	154	7	28	60
1885	4,387	102	2	35	65
1886	4,573	211	.....	56	60
1887	4,851	244	5	45	72
1888	5,094	248	4	63	45
1889	5,448	193	10	95	40
1890	5,836	261	4	41	53
1891	6,032	319	13	68	84

* Not reported.

PAPERS ACCOMPANYING THE

THIRD ASSISTANT POSTMASTER-GENERAL

POST-OFFICE DEPARTMENT,
OFFICE OF THIRD ASSISTANT POSTMASTER-GENERAL,

Washington, D. C., November 25, 1891.

I have the honor to submit the following report, with accompanying papers, showing the operations of this office during the fiscal year ending June 30, 1891:

FINANCIAL OPERATIONS OF THE POSTAL SERVICE.

As has been usual, before presenting the financial statement for the year on account of which the report of this office is made, to render an account of the two preceding years. The reason for this is that considerable indebtedness remains at the close of the year, the amount of which can only be approximated upon the best available data. This indebtedness is satisfied in by far the greater part, if not wholly, within the ensuing two years, during which time the appropriations remain available for the purpose before being finally covered by the Treasury. In the new statement, therefore, actual payments are shown in place of estimated liabilities shown in previous statements. Following this custom, the accounts for the years 1889 and 1890 are now presented. In these statements, as well as in the statement for the year ending June 30, 1891, the expenditures and liabilities comprehend only those items as are appropriated for by Congress, the amounts earned by the aided and nonaided lines of the Pacific railroads being still to be provided for by Congress, or else certified to the Secretary of the Treasury under existing law.

FISCAL YEAR ENDING JUNE 30, 1889.

REVENUE.

1. Ordinary postal revenue:

(a) Letter postage paid in money	\$176,612.28
(b) Box rents	2,188,578.98
(c) Fines and penalties	19,900.20
(d) Postage stamps, stamped envelopes, newspaper wrappers, and postal cards	52,953,101.83
(e) Dead letters	12,722.38
(f) Miscellaneous	36,890.70

Total ordinary postal revenue

55,387,806.97

2. Receipts from money-order business

787,804.81

Aggregate

56,175,611.18

Less amount charged to bad debts, compromise, and suspense cases ..

27,596.26

Leaves total revenue

56,148,014.92

EXPENDITURES AND LIABILITIES.

Expenditures:

1. Amount expended from July 1, 1888, to September 30, 1889	\$61,376,847.24
2. Amount expended from October 1, 1889, to September 30, 1890	268,485.15
3. Amount expended from October 1, 1890, to September 30, 1891	717,109.76

Total amount paid out of appropriations from July 1, 1888, to September 30, 1891, on account of the service of the year ending June 30, 1889

62,362,442.15

Liabilities:

Ascertained amount of unpaid indebtedness remaining on September 30, 1891, on account of the service of the year ending June 30, 1889, as stated by Auditor	\$13,492.20
Total amount of expenditures and liabilities for the service of the year	62,375,934.35
Leaves cash deficiency in postal revenue.....	6,227,919.43

SAVINGS BY PREVIOUS CONTRACTS.

The great reductions in the cost of procuring supplies of postage stamps, stamped envelopes, postal cards, and official envelopes, effected during the past fourteen years will appear in the following statement:

ADHESIVE POSTAGE STAMPS.

Prices paid per thousand for adhesive postage stamps under the various contracts since 1877.

Kinds.	Contracts ending June 30—				
	*1877.	†1881.	1885.	1889.	1893.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
1. Ordinary adhesive postage stamps.....	14.99	9.98	9.19	6.99	7.47
2. Newspaper and periodical stamps.....	100.00	15.98	9.19	18.00	18.00
3. Postage-due stamps.....		9.98	9.19	8.49	8.49
4. Special-delivery stamps.....				18.00	18.00

* Ended April 30.

† Ended April 30, and extended to June 30.

STAMPED ENVELOPES.

In the following will appear the prices per thousand for stamped envelopes and newspaper wrappers of the sizes and kinds in use in 1877, and since then:

Prices paid per thousand for stamped envelopes and newspaper wrappers under the various contracts since 1877, of the sizes then and now in use.

Size.	Quality.	Contract of—				
		1874.	1878.	1882.	1886.	1890.
No. 1: Small note.....	First	\$2.10	\$1.60	\$1.50	\$1.30	\$1.13
No. 3: Full letter.....	First	2.47	2.05	1.80	1.50	1.40
Do.....	Second.....	2.37	1.85	1.70	1.20	1.02
Do.....	Third.....	2.00	1.75	1.55	.98	.90
No. 4: For circulars		1.60	1.30	1.17	.82	.75
No. 5: Extra letter	First	2.90	2.45	2.35	1.80	1.70
Do.....	Second.....	2.80	2.20	2.00	1.50	1.36
Do.....	Third.....	2.30	2.10	1.78	1.17	1.14
No. 6: Extra letter for circular		1.90	1.50	1.38	1.12	1.09
No. 7: Official.....	First	4.50	3.80	3.52	2.80	2.50
Do.....	Second.....	4.30	3.40	3.20	2.50	2.30
No. 8: Extra official	First	5.00	4.00	3.90	3.30	2.90
No. 12: Newspaper wrappers.....		1.20	1.10	.99	.88	.70
Average price per thousand		2.72	2.23	2.07	1.63	1.45

POSTAL CARDS.

The prices appearing in the several contracts for postal cards of the size now and heretofore in use since the introduction of these articles in 1873 are as follows:

Contract from—	Per thousand
1873 to 1877.....	\$1.384
1877 to 1881.....	.896
1881 to 1885.....	.5443
1885 to 1889.....	.4771
1889 to 1893.....	.36

I have the honor to be, very respectfully, your obedient servant,
A. D. HAZEN,
Third Assistant Postmaster-General.
HON. JOHN WANAMAKER,
Postmaster-General.

REPORT OF SUPERINTENDENT OF THE MONEY-ORDER SYSTEM.

POST-OFFICE DEPARTMENT,
 OFFICE OF THE SUPERINTENDENT
 OF THE MONEY-ORDER SYSTEM,
 Washington, D. C., November 6, 1891.

SIR: I have the honor to submit the following report of the operations of the postal money-order system for the fiscal year which closed on the 30th of June last, the same being the twenty-seventh annual report of the head of this division of the Post-Office Department. This report shows that, as compared with the issues and payments of the previous year, although there was a slight decrease in the number and amount of postal notes issued and paid last year, there was on the other hand a gratifying increase in the aggregate number and amount of both domestic and international money orders, which afford an almost absolute security in remittances by mail. The total volume of last year's domestic and international money-order and postal-note transactions, both in number and amount, considerably exceeded that of any previous year in the history of the system.

NUMBER OF MONEY-ORDER OFFICES.

As stated in my last annual report, the number of money-order offices in operation June 30, 1890, was 9,382, all of which were authorized to issue and to pay postal notes as well as money orders. During the last fiscal year new offices of this kind were established to the number of 706, while the number discontinued during the same period was 18, leaving 10,070 in operation June 30, 1891. The number of such offices at present in operation is 10,348, 283 having been established and 5 discontinued since June 30, 1891.

NUMBER OF POSTAL-NOTE OFFICES.

Offices of the class known as "postal-note offices," which, under the act approved January 3, 1887, are authorized to issue postal notes but

not to pay them, were in operation June 30, 1890, to the number of 728. There were established during the last fiscal year 141 new offices of this kind, and during the same period 166 were discontinued, leaving in operation on the 30th of June last, 703, or 25 less than at the close of the previous year. Of the 166 reported as discontinued, however, 146, on account of the demand for additional facilities thereat, were made money-order offices, and as such authorized to issue and to pay both postal notes and money orders. At the present time there are 697 postal-note offices in operation, 69 having been added to, and 75 dropped from, the list of such offices since June 30, 1891. From only 6 of these 75 has the system been withdrawn, however, the remaining 69 having become money-order offices, thereby gaining greatly in facilities for the transmission of money through the mails.

ISSUES AND PAYMENTS OF DOMESTIC MONEY ORDERS.

The number of domestic money orders issued during the year was	
11,451,274, aggregating in amount.....	\$119, 122, 236.50
The number of such orders paid during the same	
period was 11,312,998, of the value of.....	\$118, 025, 952.94
And the number repaid 85,603, amounting to.....	817, 922.77
Making the total amount of payments and repayments.....	118, 843, 875.71
And the excess of issues over payments and repayments	278, 360.79
The gross amount of fees received by postmasters from the public	
for the issue of domestic money orders was.....	1, 004, 457.71

A comparison of the above with a summary of the like transactions for the preceding year shows:

(1) An increase of 826,547, or 7.77 per cent, in the number of orders issued; of 798,450, or 7.59 per cent, in the number of orders paid; and of 3,543, or 4.31 per cent, in the number of orders repaid.

(2) An increase of \$4,759,479.38, or 4.16 per cent, in the amount of orders issued; and of \$4,512,652.88, or 3.97 per cent, in the amount of orders paid; and a decrease of \$16,408.52, or 1.96 per cent, in the amount of orders repaid.

(3) An increase of \$53,702.14, or 5.64 per cent, in the gross amount of fees received.

The average amount of the orders issued was \$10.40, or 36 cents less than the average amount of the orders issued in the previous year.

The average fee received was 8.77 cents, being 0.17 of a cent less than the average fee received in 1889-'90.

ISSUES AND PAYMENTS OF POSTAL NOTES.

The number of postal notes issued during the year was 6,802,558, of	
the total value of.....	\$11, 753, 849.28
And the number of notes paid and repaid during the same period	
was 6,780,117, amounting to	11, 714, 430.89
The excess in the amount of issues over payments and repay-	
ments being	39, 418.39
The gross amount of fees received from the public (including fees	
received for duplicates of invalid notes) was.....	204, 383.41

The foregoing, compared with the statement of the previous year exhibits—

(1) A decrease of 125,267, or 1.80 per cent, in the number of postal notes issued, and of 85,794, or 1.24 per cent, in the number paid and repaid.

(2) A decrease of \$406,640.32, or 3.34 per cent, in the amount of postal

PAPERS ACCOMPANYING THE

and of \$414,143.55, or 3.41 per cent, in the amount of notes received. The increase of \$3,739.80, or 1.79 per cent, in the gross amount of the average amount of the postal notes issued was \$1.72, or 3 cents less than the average amount of the notes issued the preceding year.

GENERAL FINANCIAL RESULTS.

The domestic and international money orders and the postal notes issued during the last fiscal year numbered in all 19,177,728, and in value amounted to \$145,319,753.25; the payments and repayments numbered 18,458,032 and amounted to \$135,552,504.09, and the aggregate amount of the fees received from the public was \$1,386,948.59. These figures compared with those representing the total volume of business transacted the previous year show an increase of 766,122, or 4.16 per cent, in the total number of issues; of 724,431, or 4.08 per cent, in the total number of payments and repayments; of \$5,566,370.82, or 3.98 per cent, in the total amount of the issues; of \$4,194,760.48, or 3.18 per cent, in the amount of the payments and repayments; and of \$64,455.89, or per cent, in the aggregate amount of fees received.

The total revenues, as reported in quarterly statements by the Auditor, from all branches of the money-order and postal-note business were deposited, as shown below, with the Assistant Treasurer of the United States at New York to the credit of the Treasurer of the United States, for the service of the Post-Office Department, as required by section 4050 of the Revised Statutes:

Quarter ended—	Amount.	Deposited.
September 30, 1890.....	\$187,972.14	Feb. 11, 1891
December 31, 1890.....	256,515.95	Apr. 22, 1891
March 31, 1891.....	218,940.68	July 14, 1891
June 30, 1891.....	201,063.08	Oct. 15, 1891
Total.....	\$866,491.85	

This total of \$866,491.85 exceeds by \$42,271.61 the revenues of the previous year deposited in like manner.

The expenses of the system are defrayed partly out of the proceeds of the business and partly from appropriations made by Congress. The expenses paid during the last year out of the proceeds of the business have already been stated in this report, and the customary comparison of the amount of expenses paid out of appropriations with the amount of the revenues deposited as above stated with the Assistant Treasurer of the United States at New York may now be made. The expenses of the latter class for the last fiscal year were as follows:

Salaries to fifty employes in the Superintendent's office.....	\$65,020.00
Salaries to employes in the money-order division of the Auditor's office..	236,000.00
Stationery furnished for use in the Superintendent's office.....	318.01
Books, blanks, printing, and stationery furnished for use in the money-order division of the Auditor's office.....	9,275.61
One-half of salaries of engineers and other employes, under the supervision of the Superintendent of the Post-Office Department, in the money-order building.....	5,080.00
One-half rent of the money-order building.....	4,000.00
Estimated miscellaneous expenses of said building, including cost of fuel, gas, etc.....	2,000.00

REPORT OF THE POSTMASTER-GENERAL.

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Rent paid for building known as "Marini's Hall"	\$2, 333. 32
Five-sixths of the rent paid for the building known as the "Busch building"	1, 229. 66
Salaries of watchmen and laborers, and incidental and miscellaneous expenses of the two last named buildings	6, 516. 59
Allowances to postmasters at first and second class post-offices for clerk-hire in the money-order business, which, under the act of June 29, 1886, have been paid since July 1, 1888, out of appropriations instead of from the proceeds of that business, the said amount, as reported by the First Assistant Postmaster-General, being	551, 035. 00
Total	881, 808. 19

This total of expenses paid out of appropriations exceeds the sum of \$866,491.85 of revenue deposited with the assistant treasurer as above stated by \$15,316.34, and the latter sum represents expenditures over and above the entire receipts of the system for the year.

The year ended June 30, 1891, was the third in a succession of years in which the expenditures of the system exceeded its receipts. The deficit of 1889 was \$8,128.73; that of 1890, \$24,558.41. The latest one, viz., \$15,316.34, may be attributed, as was that of the previous year, to a further reduction in the average amount of the domestic money orders and the consequent diminution of the average amount of the fees received therefor, and again, to the fact that, although the aggregate receipts amounted to more last year than during the previous year, the expenditures in some directions increased in a greater degree. The total amount allowed to postmasters at first and second class post-offices for money-order clerk-hire was \$37,260.78 greater, while the salaries, per diem allowances, and expenses of post-office inspectors employed in the money-order service were \$6,596.81 more than during the preceding year.

While it is encouraging to note that the deficit of last year, although greater by \$7,187.61 than that of 1889, was \$9,242.07 less than that of 1890, this partial recovery, unless strict economy in expenditures and allowances of every kind is practiced, is not sufficient to warrant the assumption that the system will soon again be entirely self-supporting, or can continue to sustain, without a considerable annual deficit, competition on the part of private enterprises of a similar character.

I am, sir, very respectfully, your obedient servant,

C. F. MACDONALD,
Superintendent of the Money-Order System.

Hon. JOHN WANAMAKER,
Postmaster-General.

REPORT OF THE SUPERINTENDENT OF FOREIGN MAILS.

POST-OFFICE DEPARTMENT,
OFFICE OF FOREIGN MAILS,
Washington, D. C., November 4, 1891.

SIR: I have the honor to submit the following report of the principal operations in connection with the foreign mail service during the fiscal year ended June 30, 1891:

From table (A) immediately following, showing the weights of the mails dispatched by sea to foreign countries, and the percentage

dispatched to each of the countries named therein, it will be seen that the aggregate weights of said mails were—

	Grams.	Pounds.
Letters and post cards	346, 182, 466=	763, 332
Other articles.....	1, 796, 061, 992=	3, 968, 080
Total		4, 721, 422

Of which the mails for transatlantic destinations comprised—

	Grams.	Pounds.	Per cent.
Letters and post cards	306, 143, 726=	672, 842	88.15
Other articles.....	1, 288, 231, 038=	2, 840, 549	71.77
Total		3, 513, 391	

And that of the transatlantic mails, the mails for Great Britain, consisted of—

	Grams.	Pounds.	Per cent.
Letters and post cards	122, 378, 834=	266, 844	40.10
Other articles.....	629, 708, 762=	1, 388, 610	48.88
Total		1, 658, 354	

The mails for Germany:

	Grams.	Pounds.	Per cent.
Letters and post cards	63, 507, 086=	140, 033	20.81
Other articles.....	264, 576, 519=	583, 391	20.54
Total		723, 424	

The mails for France:

	Grams.	Pounds.	Per cent.
Letters and post cards	19, 855, 943=	43, 782	6.51
Other articles.....	103, 790, 410=	228, 868	8.08
Total		272, 640	

with each of which countries there is direct steamship communication, leaving as the weights of the mails for all other transatlantic destinations—

	Grams.	Pounds.	Per cent.
Letters and post cards	99, 402, 363=	219, 183	32.58
Other articles.....	290, 154, 347=	639, 790	22.49
Total		858, 973	

* * * * *

N. M. BROOKS,
Superintendent of Foreign Mails.

The POSTMASTER-GENERAL.

REPORT OF SUPERINTENDENT OF THE DEAD-LETTER OFFICE.

POST-OFFICE DEPARTMENT,
OFFICE OF SUPERINTENDENT DEAD-LETTER OFFICE,
Washington, D. C., October 20, 1891.

I have the honor to submit for your information and consideration the following report, as covering the business and operations of the Dead-Letter Office for the fiscal year ended June 30, 1891:

* * * * *

There were received during the year 6,829,460 pieces of original dead

mail matter, an increase of 311,904 pieces, or 4 $\frac{1}{2}$ per cent (a less increase than for the previous year) over the number received during the fiscal year ended June 30, 1889. In addition to this number there were also received 170,600 letters without valuable inclosures which had been returned to the writers, but failing of delivery were again sent to the Dead-Letter Office. These, together with the 287 "held-for-postage" letters, and 4,035 letters of foreign origin on hand and undisposed of on July 1, 1889, make the total number of pieces treated during the year 7,004,382, which were classified, treated, and disposed of in accordance with the requirements of the regulations.

* * * * *

Of the unclaimed and undelivered mail matter received during the year, 422,639 were letters misdirected, or only partially addressed—that is, not addressed to a post-office, or addressed to a post-office without the State being given, or addressed to a post-office not in the State named, etc.; 65,943 of these, an increase of 9 per cent over last year, were of foreign origin, while there was a decrease of 23,130, or over 5 per cent, in those of domestic origin.

This of course takes no note of the nearly 5,000,000 imperfectly addressed letters withdrawn from the mails by the Railway Mail Service and the corrected addresses supplied by the post-offices at the several centers of that service.

Twenty-seven thousand six hundred and seventy-seven letters, an increase of nearly 19 per cent over last year, were entirely blank, bearing no superscription whatever. Among these were frequently found the letters of business men, of which a large proportion contained inclosures of money, drafts, checks, and other valuable commercial papers.

Of the domestic misdirected letters, the addresses of 65,943 were corrected and the letters forwarded to the presumed destinations; 13,098 failing of delivery, were returned to the Dead-Letter Office, opened and treated accordingly.

One hundred and four thousand six hundred and seventy-three, an increase of nearly 5 per cent, were letters "held for postage;" of these, 85,823 were to domestic addresses, and 18,850 addressed to Canada and other countries to which matter is unmailable except upon prepayment of postage.

One hundred and eighty thousand seven hundred and eighty-four, an increase of 9 per cent, were letters addressed to persons in care of hotels. The guests to whom the letters belonged having departed without leaving their addresses or forwarding orders for their mail, the letters were returned to post-offices and thence sent to the Dead-Letter Office.

Forty-two thousand six hundred and forty-eight were letters to fictitious addresses, and largely correspondence relating to what is known as "green goods" or "saw-dust" swindles, many of them containing money for the purchase of these fraudulent goods. As parties engaged in these unlawful enterprises invariably do so under assumed names, when the character and business of such persons are discovered by the postal authorities the matter addressed to them is declared "fictitious," and in the absence of required identification delivery is withheld.

Eighty thousand one hundred and fifty-three were domestic parcels of merchandise, books, clothing, needlework, jewelry, etc., 6,531 of which were misdirected, while 17,428 were without address, many of them without either wrapper or address (having been insecurely inclosed).

and others from which the addresses had become separated and lost. A large proportion were those upon which the required amount of postage to entitle them to transmission through the mails had not been prepaid, insufficient payment being due to inclosures subjecting them to a higher rate of postage. Nineteen thousand two hundred and nine, an increase of 57 per cent, contained merchandise and matter addressed to postal union countries, and not transmissible as parcels.

Twenty-nine thousand eight hundred and nine of the domestic parcels were, after correspondence, either forwarded to destination or returned to senders, and 37,242 were filed to await reclamation, in the absence of which, at the expiration of two years, to be disposed of at public auction.

Thirty thousand two hundred and twenty-three contained money, amounting in all to \$47,983. Of these, 21,183, or 70 per cent, containing \$36,759.41, were delivered to the owners or were in process of restoration, while 9,040 with \$11,223.59 were filed as undeliverable. It should be added that 4,400, or nearly 50 per cent, of the letters so filed were simply blank envelopes inclosing coins found loose in the mails and in the various post-offices and sent to the Dead-Letter Office through the post-offices at the headquarters of the several divisions of the Railway Mail Service, and the ownership of which there was no possible means of ascertaining.

The greater portion of the money separated from letters filed as undeliverable and ultimately turned into the United States Treasury comes from dupes of what have been referred to as "green goods" swindles. The remittances in these cases, varying from \$5 to \$100, are generally made under fictitious names, often by an initial or number merely, so that proper identification of the senders is impracticable. Besides, even when postmasters are able to trace the senders and require, as contingent to delivery, the bona fide signature of such reputed senders, refusal generally follows and claim to the valuable inclosure is abandoned.

Four thousand and sixty-five had inclosures of postal notes in small sums under \$5, aggregating \$6,064.06, all of which contained correspondence insuring their restoration to senders, except 306, containing \$526.53, which were filed subject to reclamation upon proper application.

Thirty thousand three hundred and twelve were found to contain drafts, checks, notes, deeds, mortgages, etc., representing \$1,862,293.55, while 41,288 contained paid and canceled obligations, receipts evidencing payments of money, and miscellaneous papers of more or less value. Ninety-five per cent of the former and 93 per cent of the latter were delivered to the owners, or were in process of restoration.

Forty-one thousand two hundred and six contained photographs, 30,122 of which were restored to the senders. Many of these contained no clue to the senders, and yet, aided by the names of the artists on the photographs, the office, through correspondence, was enabled in time to discover the owners and to make restoration.

Three thousand one hundred and sixty-six were, upon being opened, found to contain lottery tickets, 74 per cent of which were received during the first four months of the year, and all of which are by law declared unavailable.

It may be of interest in this connection to note that, whereas in former years there were annually received in the Dead-Letter Office something like 12,000 letters containing lottery tickets—a monthly average of nearly 1,000—the number now received since the provisions

of the new lottery law went into practical operation has fallen to an average of less than 40 per month, the entire receipts for the first quarter of the current fiscal year amounting to only 99.

* * * * *

While the amount of mail matter annually sent to the Dead-Letter Office may seem "enormous," when it is considered with reference to the great volume committed to the mails and the carelessness and mistakes of the public in the employment of postal facilities, the wonder is after all that the amount is not greater, and that postmasters should succeed in reducing it to the prevailing limits.

Indeed, it may well be taken as an evidence of the improved condition and increased efficiency of the service that, whereas the legitimate increase in the quantity of matter received at the Dead-Letter Office has been but $4\frac{1}{2}$ per cent., the increase in the quantity sent through the mails has exceeded 8 per cent.

From memoranda of the latest count of matter dispatched through the mails of this country to domestic addresses (this statement taking no account of that sent to or received from foreign countries), it is estimated that there were transmitted during the year something over 2,000,000,000 ordinary letters.

From this it will appear that the proportion of this immense number of letters sent to the Dead-Letter Office, from all causes, comprised less than one-third of 1 per cent, or about 1 letter in every 325. The total increase of all matter received in the Dead-Letter Office was but 311,000 pieces, while the increase in letters alone sent through the mails was nearly 150,000,000.

While having no direct reference to or connection with the period covered by this report, it nevertheless seems proper to note that, whereas this report shows an increase of $4\frac{1}{2}$ per cent, a less increase than for the preceding year—the first quarter of the present fiscal year shows a reduction in the percentage of increase over the corresponding quarter of last year, the receipts of all matter being 1,608,339 pieces as against 1,591,577, or an increase of a little more than 1 per cent only.

* * * * *

With an increase in the receipts of over 300,000 pieces, together with some 210,000 on hand at the close of the previous fiscal year, the office was obliged to treat and properly dispose of over 500,000 pieces in excess of the number for the preceding year.

Notwithstanding this, the receipts of the year with its accumulation were all properly disposed of, so that its close found the work and business of the office in excellent condition, and practically up to current daily receipts and requirements.

* * * * *

I have the honor to be, very respectfully,

D. P. LEIBHARDT,
Superintendent.

The POSTMASTER-GENERAL.

REPORT OF THE AUDITOR OF THE TREASURY FOR THE POST-OFFICE DEPARTMENT.

OFFICE OF THE AUDITOR OF THE TREASURY FOR THE POST-OFFICE DEPARTMENT, *Washington, D. C., October 10, 1891.*

SIR: I have the honor to submit herewith the annual report of receipts and expenditures of the Post-Office Department, as shown by the accounts of this office, for the fiscal year ended June 30, 1891. All expenditures on account of service of last and prior fiscal years are stated to September 30, 1891, as in former reports.

REVENUE ACCOUNT OF THE POST-OFFICE DEPARTMENT.

Service of the fiscal year 1891.

Postal revenues of the year ended June 30, 1891.....	\$65, 831, 785. 72
Expenditures to September 30, 1891.....	71, 682, 463. 39

Excess of expenditures over all revenues	5, 730, 677. 67
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Amount placed with the Treasurer to the credit of the Department, being grants from the general Treasury in aid of the postal revenue under section 2 of the act approved June 30, 1890 (Statutes, Vol. 26, chapter 641, p. 208).....	2, 200, 000. 00
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Excess of expenditures over grants.....	3, 530, 677. 67
---	-----------------

Amount of balances due from late postmasters closed by—

Suspense	\$329. 86
Bad debts	14, 064. 59
Compromise debts	8, 481. 91

Net loss by suspense, bad, and compromise debts.....	22, 876. 36
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Amount to be placed with Treasurer	3, 553, 554. 03
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Service of the fiscal year 1890.

Amount placed with the Treasurer to the credit of the Department, being grants from the general Treasurer in aid of the postal revenues under section 2 of the act approved March 2, 1889 (Statutes, Vol. 25, chapter 374, p. 845)	1, 500, 000. 00
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Amount to be placed with the Treasurer of the United States, as shown by the report for the fiscal year 1890..	\$571, 933. 71
Expended from October 1, 1890, to September 30, 1891....	631, 105. 47
	1, 203, 039. 18

Balance available on account of the fiscal year 1890	296, 960. 83
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Service of the fiscal year 1889.

Balance available September 30, 1890	\$502, 682. 53
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Amount placed with the Treasurer to the credit of the De- partment, being grant from general Treasury in aid of the postal revenues under section 2 of the act approved July 24, 1888 (Statutes, Vol. 25, chapter 702, p. 347).....	700, 000. 00
	1, 202, 682. 53
Expended from October 1, 1890, to September 30, 1891.....	717, 109. 76

Balance to be placed in the general Treasury	485, 572. 77
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REPORT OF THE POSTMASTER-GENERAL.

• 953

Service of the fiscal year 1888.

Balance continued from September 30, 1890, to June 30, 1891 (\$99,439.07 of which is for the payment of claims of letter-carriers for compensation for extra time in the months of May and June, 1888, as per joint resolution, Public, No. 28, approved July 2, 1890)	\$171, 102. 83
Expended from October 1, 1890, to June 30, 1891—	
For extra time for letter-carriers	\$3, 231. 41
Other expenditures authorized September 30, 1890....	4, 933. 90
	<hr/> 8, 165. 31
Balance to be placed in the general Treasury	162, 937. 52

Claims, 1888 and prior years.

Amount expended from October 1 to September 30, 1891.....	27, 626. 22
Amount placed with the Treasurer to the credit of the Department, being grants from the general Treasury in aid of the postal revenues under—	
March 3, 1891 (section 2, statutes, Vol. 26, chapter 540, p. 895)	3, 247. 47
March 3, 1891 (section 3, statutes, Vol. 26, chapter 540, p. 897)	3, 035. 55
March 3, 1891, (section 1, statutes, Vol. 26, chapter 540, p. 880)	14, 394. 68
September 30, 1890 (section 5, statutes, Vol. 26, chapter 1126, p. 551)	7, 790. 77
	<hr/> 28, 468. 47
Balance available on account 1888 and prior years.....	842. 25

Claims, 1887 and prior years.

Amount expended from October 1, 1890, to September 30, 1891.....	13, 049. 34
Amount placed with the Treasurer to the credit of the Department, being grant from the general Treasury in aid of the postal revenues under act September 30, 1890 (section 3, statutes, Vol. 25, chapter 1126, p. 545).....	13, 303. 61
	<hr/> 254. 27
Balance available on account 1887 and prior years.....	

GENERAL REVENUE ACCOUNT.

Postal revenues for the year ended June 30, 1891	65, 931, 785. 72
Expenditures for the service of 1891.....	\$71, 662, 463. 39
Expenditures for the service of 1890.....	631, 105. 47
Expenditures for the service of 1889.....	717, 109. 76
Expenditures for the service of 1888.....	8, 165. 31
Expenditures for the service of 1888 and prior years...	27, 626. 22
Expenditures for the service of 1887 and prior years ...	13, 049. 34
	<hr/> 73, 059, 519. 49
Total expenditures to September 30, 1891.....	
Excess of expenditures over revenue	7, 127, 733. 77
Amount due from late postmasters on accounts closed by suspense.....	329. 86
Amount due from late postmasters on accounts closed by bad and compromised debts	22, 546. 50
	<hr/> 22, 876. 36
Net loss by suspense, bad, and compromise debts.....	
Excess of expenditures.....	7, 150, 610. 13

Grants from the general Treasury:

Under act of July 24, 1888	\$700,000.00
Under act of March 2, 1889	1,500,000.00
Under act of June 30, 1890	2,300,000.00
Under act of September 30, 1890	21,084.38
Under act of March 31, 1891	20,677.70
Total grants	\$4,441,772.08
Excess of expenditures over grants	2,708,838.05
The balance standing to the credit of the general revenue account	
September 30, 1890	3,536,815.68
Balance standing to the credit of the general revenue account	
September 30, 1891	826,977.63
Of which there was due by late postmasters in suit	287,066.49

POSTMASTER'S QUARTERLY ACCOUNTS CURRENT.

The net revenues of the Department from postages, being aggregate revenues at post-offices for the fiscal year, less the compensation of postmasters and clerks and the contingent office expenses, were:

For the quarters ended—

September 30, 1890	\$9,327,576.30
December 31, 1890	10,970,606.72
March 31, 1891	11,154,805.89
June 30, 1891	10,047,775.01
Total	41,500,763.92

The number of quarterly returns of postmasters received and audited, on which the above sum was found due the United States was:

For the quarter ended—

September 30, 1890	63,185
December 31, 1890	62,248
March 31, 1891	61,052
June 30, 1891	62,686
Total	249,181

STAMPS SOLD.

The amount of stamps, stamped envelopes, newspaper wrappers, letter sheets, and postal cards sold, was:

For the quarter ended—

September 30, 1890	14,374,724.76
December 31, 1890	16,263,881.13
March 31, 1891	16,531,343.80
June 30, 1891	15,366,825.97
Total	62,559,775.66

LETTER POSTAGE.

The amount of postage paid in was..... 98,426.72

Included in the above amount are the following sums paid by foreign countries in the adjustment of their accounts:

Great Britain and Ireland	34,515.34
Japan	1,553.58
Canada	28,991.56
Mexico	11,355.48
Switzerland	1,545.27
Queensland	81.33
Victoria	374.20
Jamaica	652.97

Included in the above amount are the following sums paid by foreign countries in the adjustment of their accounts—
Continued.

Bermuda.....	\$4, 107. 95	
Belgium.....	6, 551. 36	
Curaçoa.....	2, 511. 62	
Costa Rica.....	1, 108. 13	
New Zealand.....	1, 451. 90	
Salvador.....	2, 123. 08	
British Honduras.....	788. 62	
British Guiana.....	1. 34	
Dutch Guiana.....	4. 50	
Saint Vincent.....	13. 72	
Saint Thomas.....	62. 00	
Turks Island.....	26. 77	
Antigua.....	43. 47	
Saint Lucia.....	7. 53	
Grenada.....	5. 32	
		<u>\$97, 787. 61</u>
Balance collected by postmasters		639. 08

The following balances were paid and charged to the appropriations for balances due foreign countries:

Service of 1891:

Germany.....	\$16, 494. 60
International Bureau.....	763. 16
Italy.....	7, 860. 32
Denmark.....	14, 358. 24
Norway.....	1, 508. 41
Sweden.....	2, 527. 58
Netherlands.....	13, 907. 71
Newfoundland.....	434. 93
Bulgaria.....	811. 03
Bahamas.....	490. 73
Austria.....	2, 241. 65
Servia.....	1, 357. 12
Roumania.....	119. 91

Total for 1891..... \$62, 875. 39

Service of 1890:

France.....	37, 959. 97
Bahama.....	749. 07
Canada.....	61. 17

Total for 1890..... 38, 770. 21

Service of 1889:

France.....	41, 147. 33
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Aggregate amount paid..... 142, 792. 93

MAIL TRANSPORTATION.

The amount charged to "transportation accrued" and placed to the credit of mail contractors and others for mail transportation during the fiscal year was:

For the regular supply of routes.....	\$31, 928, 515. 49
For the supply of special offices.....	47, 926. 26
For the supply of mail-messenger offices.....	1, 052, 661. 38
For the salaries of railway postal clerks.....	5, 909, 216. 85
For the salaries and expenses of the superintendents of the Railway-Mail Service.....	75, 835. 54
Total.....	<u>39, 014, 155. 52</u>

FOREIGN MAIL TRANSPORTATION.

New York to Great Britain and Ireland and countries beyond via Great Britain.....	\$207,317.69
New York to Great Britain and Germany and countries beyond.....	221,577.20
Boston to Great Britain and Ireland.....	1,338.43
Philadelphia to Great Britain and Ireland.....	1.14
New York, Baltimore, Philadelphia, Boston, Key West, New Orleans, San Francisco, to West Indies, Central and South America, Mexico, etc.....	101,305.24
Boston to Nova Scotia.....	1,367.28
Upper Pacific coast.....	2,601.93
San Francisco to China, Japan, Farther India, Australia, and South Sea Islands.....	79,530.26

Total foreign mail..... **\$615,099.17**

Total "transportation accrued"..... **30,020,194.00**

The amount credited to "transportation accrued" and charged to mail contractors for over credits, being for fines and deductions, was..... **382,572.67**

The amount of fines and deductions remitted was..... **28,485.00**

Net amount of fines and deductions..... **354,087.67**

Net amount of "transportation accrued"..... **30,374,281.11**

The amount paid during the year was..... **27,306,094.34**

Excess of "transportation accrued"..... **3,168,186.77**

Very respectfully,

T. B. COULTER,
Auditor.

Hon. JOHN WANAMAKER,
Postmaster-General.

No. 1.—Statement exhibiting quarterly the receipts of the Post-Office Department, under their several heads, for the fiscal year ended June 30, 1891.

Accounts.	Quarter ended—				Aggregate.
	Sept. 30, 1890.	Dec. 31, 1890.	Mar. 31, 1891.	June 30, 1891.	
Letter postage.....	\$13,285.87	\$2,396.30	\$48,436.25	\$34,306.30	\$98,424.72
Box rents and branch offices..	578,848.46	588,578.00	591,069.66	604,272.48	2,362,768.60
Fines and penalties.....	3,501.16	7,612.77	7,331.51	2,678.15	21,123.59
Postage stamps, stamped envelopes, letter sheets, wraps, and postal cards.....	14,374,724.76	16,263,831.13	16,554,343.80	15,306,825.97	62,559,735.66
Dead letters.....	2,487.32	5,061.39	2,506.63	1,979.43	12,034.96
Revenue from money-order business.....	187,972.14	258,515.95	218,940.68	201,063.08	\$68,491.85
Miscellaneous.....	5,089.66	3,712.41	1,797.71	1,964.36	12,564.14
Total.....	15,165,909.37	17,128,357.95	17,424,426.64	16,213,091.76	65,931,785.72

REPORT
OF THE
SECRETARY OF AGRICULTURE.

U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
Washington, D. C., October 27, 1891.

To the PRESIDENT:

I have the honor to submit my third annual report as Secretary of Agriculture, and it is with no little gratification that I assume this duty. Two years ago the condition of agriculture was a subject of grave anxiety, an anxiety which among the farmers themselves found vent in an almost universal expression of unrest and discontent with existing conditions. Last year I was able to indicate the beginning of an improved condition of agriculture in response to the well-directed efforts of your administration, aided by the wise enactments of Congress, and to point out the several methods adopted in the Department of Agriculture with a view to ameliorating the condition of our farmers, and to record also indications of their successful outcome. To-day I lay before you a report full of encouragement. The good work so promptly undertaken has been maintained and developed. The time that has elapsed since some of the most important measures for the benefit of the farmer were adopted, short though it has been, has already served to produce many of the good results expected of them. The work of this Department on behalf of the farmer has been constant and varied, every effort being made to enlarge the sphere of its usefulness to the fullest extent compatible with the means placed at my disposal, and the responsibilities and powers imposed upon the Department by wise legislation have been exercised with due appreciation of their importance, and pushed forward with energy and activity. In carrying on this work it gratifies me to be able to acknowledge the cordial good will and intelligent activity which the responsible officers of the Department have brought to my aid.

The wide enlargement of the powers of this Department, the general recognition of the added dignity which attaches to an executive depart-

ment of the Government, and, in general, the sense of enlarged ability for the accomplishment of good, have had the natural result of serving as an incentive to further effort on the part of every member of the force. Furthermore, our efforts have been encouraged by rapidly increasing recognition of the value of the Department, and of its possibilities on behalf of practical agriculture. Evidences of such appreciation are, and have been, multiplying from all sections of the country and from all classes of our people. Not only has the efficiency of the Department been cordially recognized within the limits of our own country, but its work has elicited practical tokens of appreciation abroad, of the greatest value to our agricultural interests.

It is also a matter of congratulation that in this year of plenty we shall be able out of our abundance to supply needed nourishment to many millions of people in Europe who have not been as fortunate as ourselves in reaping a full harvest.

I have the honor to present herewith tables and other statistical data of interest in this connection. The tables showing prices of agricultural products give wholesale prices at points selected to represent every section of the country. The figures given are prices on the first trading day of the month; and the months given are selected in order that a comparison of present prices with those ruling about the same time in 1889 and 1890 may be made. The showing of advance in values of live stock at Chicago is particularly gratifying, indicating as it does a healthy reaction from the depression under which the live-stock industry labored during recent years.

Wholesale prices of agricultural products at leading cities in all sections of the United States.

CORN.

[Per bushel.]

Date.	Boston.	New York.	Atlanta.	New Orleans.	Cincinnati.	Chicago.	St. Paul.	St. Louis.	San Francisco (per cental).
1891.			White.	No. 2 mixed.	No. 2 mixed.	No. 2.	No. 2 mixed.	No. 2.	No. 1 white.
August.....	No. 2 mixed. \$0.76-\$0.77	No. 2 mixed. \$0.71½-\$0.72	\$0.87	\$0.72	\$0.63	\$0.60-\$0.60½	\$0.58-\$0.60	\$0.53½-\$0.54	\$2.05-\$2.11
September.....	.76	.74 - .75	.85	\$0.74 - .75	\$0.64 - .64½	.64½ - .65	.58 - .59	.58½ - .59	1.85 - 1.87½
October.....	.67 - .68	.61½ - .62	.82	.69 - .70	.57	.52½ - .53½	.48 - .52	.53	.....
1890.									
August.....	.57½ - .58	.52½ - .53½	.67	.55	.49 - .50	.45½ - .46	.44 - .46	.43½	1.17½ - 1.20
September.....	.57½ - .58	.53½ - .54½	.70	.61	.48½ - .49	.45½ - .46	.47½ - .49	.44 - .44½	1.32½ - 1.35
October.....	.60	.56 - .56½	.68	.63	.53 - .53½	.47½ - .48½	.47 - .48	.47½ - .48	1.27½ - 1.30
1889.									
August.....	.48½	.44½ - .44½	\$0.56 - .58	.45 - .45½	.38 - .38½	.36½	.34 - .35	.33½	1.35
September.....	.47	.42½ - .43	.56 - .58	.45	.35	.33½	.34½	.29½	1.12½
October.....	.44 - .44½	.39½ - .39½	.54 - .56	.44 - .45	.36 - .37	.31 - .31½	.31½ - .32	.29½	.....

WHEAT.

[Per bushel.]

Date.	Boston.	New York.	Atlanta.	New Orleans.	Cincinnati.	Chicago.	St. Paul.	St. Louis.	San Francisco (per cental).
1891.			Winter.	No. 2 mixed.	No. 2 mixed.	No. 2.	No. 2 mixed.	No. 2.	No. 1 white.
August.....	No. 2 mixed. \$0.99-\$0.99½	No. 2 mixed. \$0.99-\$0.99½		\$0.87-\$0.87½	\$0.87-\$0.87½	\$0.87½-\$0.88	\$0.92-\$0.93	\$0.84½-\$0.84½	\$1.55-\$1.56½
September.....	1.07½ - 1.08½	1.04½ - 1.05½		.98½ - .99	.98½ - .99	.98½ - .99½	.88 - .91	.97½ - .97½	1.70 - 1.71½
October.....	1.08½ - 1.09½	1.04½ - 1.05½		.97 - .97½	.95 - .95½	.95 - .95½	.87 - .88	.93½ - .93½	.....
1890.									
August.....	.97½ - .97½	.97½ - .97½		.93	.91 - .91½	.91 - .91½	.88 - .90	.88	1.37½
September.....	1.04½ - 1.06	1.04½ - 1.06		1.00	1.00½ - 1.01	1.00½ - 1.01	.99 - .99½	.98½ - .99½	1.37½ - 1.38½
October.....	1.02½ - 1.03½	1.02½ - 1.03½		.97 - .99	.93½ - .94½	.93½ - .94½	.90 - .91	.97½ - .98½	1.82½
1889.									
August.....	.88½ - .89½	.88½ - .89½		.78 - .79	.78 - .79	.78 - .78½	.84 - .86	.74½	1.33½
September.....	.85½ - .86½	.85½ - .86½	\$0.78½-\$0.79½	.75 - .76	.75 - .76	.78 - .78½	.73 - .74	.70½ - .71½	1.28½
October.....	.86½ - .87	.86½ - .87	.78 - .79	.81 - .83	.81 - .82	.81 - .82	.75	.79½	1.32½

Wholesale prices of agricultural products at leading cities in all sections of the United States—Continued.

OATS.

[Per bushel.]

Date.	Boston.	New York.	Atlanta.	New Orleans.	Cincinnati.	Chicago.	St. Paul.	St. Louis.	San Francisco (per cental).
1891.	No. 2, white. \$0.48 - \$0.50	No. 2, mixed. \$0.37	No. 2, mixed. \$0.50	No. 2. \$0.45	No. 2, mixed. \$0.31 - \$0.33	No. 2. \$0.27 - \$0.28	No. 2, white. \$0.37 - \$0.38	No. 2. \$0.27 - \$0.28	No. 1. \$1.47 - \$1.48
August.....	.41	\$0.35 - .36	.46	.41	.31 - .33	.28 - .29	.37 - .38	.28	\$1.32 - 1.35
September.....	.37 - .37	.33 - .33	.44	.37	.29 - .31	.26 - .27	.37 - .38	.27	.....
October.....									
1890.									
August.....	.44 - .45	.40	.48	.45	.36 - .39	.33 - .34	.....	.33	1.00
September.....	.40 - .40	.40 - .40	.50	\$0.47 - .48	.38 - .39	.35 - .35	.....	.33	1.00 - 1.02
October.....	.47 - .48	.43 - .44	.50	.47	.40 - .41	.38 - .38	.....	.39	1.02 - 1.03
1889.									
August.....	.35 - .36	.27 - .28	\$0.37 - .38	.32	.28	.21	.27 - .28	.21	1.12
September.....	.31 - .31	.29	.32 - .34	.29	.21 - .21	.19	.20 - .23	.18	1.13
October.....	.30 - .31	.29 - .29	.32 - .34	.28 - .28	.23 - .23	.19 - .19	.23 - .23	.20	1.13

* Old.

BARLEY.

[Per bushel.]

	No. 2, C. W.	No. 1, Canada.	No. 2, Spring. \$0.75 - \$0.76	Choke. \$0.55 - \$0.60	No. 2, Nominal.	Prime.	No. 1, Choice.
1891.							
August.....							\$1.05
September.....							1.57
October.....							.....
1890.							
August.....	\$0.02						\$1.48 - 1.48
September.....	1.08						1.50 - 1.55
October.....	1.70	\$0.95					1.50 - 1.55
1889.							
August.....							.....
September.....	\$0.85 - .95						1.40
October.....	.80 - .90						1.45
							1.45

[Price for No. 1.]

COTTON.

[Per pound.]

		Middling up.	Middling.	Middling.	Middling.	Middling.
1891.						
August.....		\$0.08	\$0.07½	\$0.08½	\$0.07½	
September.....		.08½	.08	.08½	.08	
October.....		.08½	.08½	.08½	.08½	
1890.						
August.....		.12½	.11½	.12	.11½	
September.....		.11	.10½	.11½	.10½	
October.....		.10½	.10½	.10½	.10	
1889.						
August.....		.11½	.11	.11	.10½	
September.....		.11½	.10½	.11½	.11	
October.....		.10½	.10½	.10½	.10½	

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BUTTER.

[Per pound.]

		Extra cream- ery.	Std. dairy best.	Fancy cream- ery.	Creamery.	Creamery.	Good to choice.
1891.							
August.....		\$0.20	\$0.17 - \$0.18	\$0.19 - \$0.20	\$0.15 - \$0.16	\$0.18	\$0.22½ - \$0.23
September.....		.23 - .24	.21	.26	.18 - .20	.23	.22½ - .26
October.....		.25 - .26	.22½ - .23	.26	.23 - .24	\$0.24 - .27	
1890.							
August.....		.19 - .20	.16	.10 - .20	.14 - .16	.17 - .19	.20 - .21
September.....		.20	.22 - .23	.24 - .25	.18 - .20	.26	.22½ - .25
October.....		.25 - .26	.20 - .21	.25	.18 - .20	.18 - .19	.26 - .30
1889.							
August.....		.20	.17 - .17½	.18 - .20	.14 - .15	.14 - .16	.18½ - .21
September.....		.21 - .22	.17 - .18	.20 - .21	.14 - .17	.17	.22½ - .24
October.....		.25 - .26	.24	.26 - .27	.18 - .22	.20 - .25	.26 - .28

Wholesale prices of agricultural products at leading cities in all sections of the United States—Continued.

EGGS.

[Per dozen.]

Date.	Boston.	New York.	Atlanta.	New Orleans.	Cincinnati.	Chicago.	St. Paul.	St. Louis.	San Francisco.
1891.	<i>Eastern extra.</i>								<i>Chalder.</i>
August.....	\$0.20	\$0.17½-\$0.18	\$0.12½	.....	\$0.12½-\$0.13	\$0.14½-\$0.15	\$0.14-\$0.15	\$0.11	\$0.27½-\$0.30
September.....	.20	.19½-.20	\$0.13-.20	.....	.16-.17	.16-.10½	.13½-.14	.10	.29-.30
October.....	.22	.22	.19-.21	.....	.17	.18-.18½	.16-.17	.10½	.....
1890.									
August.....	\$0.20-.21	.19	.15	.....	.11½-.12	.12-.13	.15-.10½	.10½	.22½-.25
September.....	.22	.21-.21½	.16	.....	.10	.15-.10½	.15-.10½	.13½	.37½
October.....	.23	.22½	.20	.....	.17-.17½	.17½-.18½	.17½-.18½	.10½	.34-.36
1889.									
August.....	.17-.18	.15½	.14-.15	.....	.11	.....	.11½-.12	.10	.30
September.....	.20	.19½	.19-.21	.....	.14	.....	.13½-.14	.12½	.32½
October.....	.23-.24	.24-.24½	.18-.20	.....	.16½-.17	.15-.15½	.18-.19	.14½	.40

Wholesale prices of agricultural products at leading cities in all sections of the United States—Continued.

TOBACCO.

Date.	New York.		St. Louis.			
	Pennsylvania seed leaf.		Missouri Burley leaf, medium to good.		Old-style leaf, medium to good.	
1891.	<i>Per pound.</i>		<i>Per 100 pounds.</i>		<i>Per 100 pounds.</i>	
Aug. 1	\$0.08½ to \$0.13		\$7.50 to \$10.00		\$5.50 to \$7.00	
Sept. 1 .....	.12½ .16		7.00 12.00		6.00 7.00	
Oct. 1 .....	.12½ .16		7.00 10.00		5.00 8.00	
1890.						
Aug. 1 .....	.08 .30		8.00 10.00		6.50 10.00	
Sept. 1 .....	.08 .30		7.50 12.00		4.00 8.00	
Oct. 1 .....	.08½ .13		7.00 10.00		5.00 7.00	
1889.						
Aug. 1 .....	.08 .30		8.00 12.00		6.00 7.50	
Sept. 2 .....	.08 .30		8.00 12.00		5.00 7.50	
Oct. 1 .....	.08 .30		7.50 10.00		5.00 6.50	

Statement showing the exports of wheat and wheat flour for the years 1887 to 1891, inclusive.

Year.	Bushels of wheat.	Barrels of flour.	Total bushels of wheat.
1887.....	101,971,949	11,518,449	153,804,970
1888.....	65,789,261	11,963,574	119,625,344
1889.....	46,414,129	9,374,803	88,600,743
1890.....	54,387,767	12,231,711	109,430,467
1891.....	55,131,948	11,344,304	106,181,316

Prices of live stock in Chicago market.

[Per 100 pounds.]

	Hogs		Cattle.			Sheep.	
	Light.	Heavy packing.	Choice to fancy.	Good to choice.	Butchers' steers.	Westerns.	Natives.
1891.							
Oct. 2	\$4.10-5.00	\$4.75-5.35	\$6.00-6.25	\$4.60-5.90	\$3.60-4.30	\$3.50-4.45	\$3.50-4.90
Sept. 1	4.85- 5.75	5.00- 5.45	5.90- 6.30	4.90- 5.80	3.75- 4.40	3.50- 4.50	3.50- 5.10
Aug. 4	4.90- 5.90	5.10- 5.70	5.70- 6.25	4.90- 5.60	3.75- 4.40	3.50- 4.80	3.75- 5.25
1890.							
Oct. 4	4.10- 4.70	4.10- 4.60	4.65- 5.15	4.15- 4.70	3.00- 3.40	3.25- 3.90	3.25- 4.90
Sept. 2	3.90- 4.60	4.10- 4.55	4.75- 5.20	4.00- 4.65	3.00- 3.50	3.25- 4.40	3.25- 4.80
Aug. 2	3.70- 3.95	3.70- 3.85	4.25- 4.75	3.60- 4.20	3.00- 3.50	3.25- 4.65	3.50- 5.00
1889.							
Oct. 1	4.20- 4.85	4.05- 4.40	3.80- 4.75	3.00- 3.70	2.75- 3.25	3.25- 4.30	3.50- 4.75
Sept. 3	3.95- 4.70	3.70- 4.10	3.75- 4.70	3.00- 3.70	2.60- 2.90	3.25- 4.10	3.40- 4.65
Aug. 3	4.25- 4.60	4.20- 4.40	3.75- 4.65	3.00- 3.60	2.60- 2.90	3.25- 4.10	3.50- 4.75

CROP VALUES OF THE YEAR.

The extraordinary fact concerning crop values of the year, at least as to cereals and meats, is that they are so well sustained in the presence of abundant yields. Corn is so far higher than in last October, and the increased quantity, at current values, makes the increment of value from two to three hundred million dollars.

Wheat, with a crop almost 50 per cent greater than last year, and the largest yield ever recorded in this country, and the largest product ever harvested in any country, commands about the same prices in the great markets as last year. Oats are lower, with immense increase of production. Barley has held its value in the face of a large crop on an enlarged area, as the new duty has kept out a large part of the usual imports, and at least a portion of the duty on the little imported has been virtually paid by the foreign growers.

The increased value of all cereals over that of last year, on the basis of October values, is not less than \$500,000,000.

The increased value of meats over those prevailing in October of last year is about 15 per cent on export values of beeves and meats exported, and 15 to 20 per cent on Chicago prices of beeves of different grades. The increase in wholesale values of all meats, on the basis of current prices, may reach \$150,000,000. Cotton is lower this year. - The large product and good prices of fruits will more than double fruit values of last year.

Taking all products together, in comparison with last year at prices current in October, the aggregate increase of value can not be less than \$700,000,000.

AGRICULTURAL EXPORTS.

A review of our exports of agricultural products during five years past shows that the exports of 1891, following the bad crop year of 1890, are larger by more than \$12,000,000 than those of the preceding year, and \$100,000,000 in excess of those of 1889. Had our exports of breadstuffs in 1891 been as large as those of the previous year, the agricultural exports of the fiscal year just closed would have exceeded \$650,000,000, or more than our total exports of all domestic products in any year prior to 1878. The indications now are that our sales abroad of the surplus from our farms will, during the present year, largely exceed the trade of any previous year.

During the first three months of the present fiscal year our exports in cereals alone have aggregated in value over \$76,000,000, made up as follows:

	Quantity.	Value per unit of quantity.	Value.
Barley bushels..	400,650	\$0.64	\$315,440
Corn do.....	7,007,342	.66	4,708,247
Oats do.....	528,915	.41	218,253
Rye do.....	4,269,936	.98	3,956,784
Wheat do.....	50,414,880	1.05	52,734,641
Flour barrels..	2,828,743	5.11	14,449,262

For the corresponding period of 1890 the total exports of these products aggregate but \$28,278,120, at values per unit of quantity as follows:

Barley	\$0.65
Corn .....	.48
Oats .....	.37
Rye .....	.61
Wheat .....	.92
Wheat flour	4.73

AGRICULTURAL IMPORTS.

An examination of our imports for the period, October 1 to July 31, 1889-'90, and 1890-'91, affords an interesting comparison of trade in agricultural products during the first ten months under our present law, and for the same period during the last year of the old law. The total purchases have increased \$28,000,000, but an analysis shows that the competition with our own agriculture has sensibly diminished under present customs regulations. This increase is confined to the free list or articles not competing with our production. Sugar, free of duty since April 1, 1891, contributes \$20,000,000 increase; tea, coffee, and cocoa, \$15,000,000; vegetable fibers, \$3,000,000. The change in rates has at the same time checked the importation of products which may be produced at home, and to this extent stimulated prices and production here. Tobacco is a notable example, only \$6,000,000 coming during the last ten months, against \$17,000,000 during the preceding period. The competition of Sumatra leaf has been largely done away with, and as a result the price of Connecticut seed-leaf fine wrappers in New York on October 1 is quoted at 25 to 42½ cents per pound, against 22 to 37½ in 1890, when the provisions of the new tariff were already known and about to go into effect, and 18 to 32½ in 1889, when the old competition was in full force. Foreign purchases of barley show a falling off of nearly \$3,500,000, and eggs more than \$1,250,000.

A noticeable falling off in the import of horses (from 3,380,529 to

1,903,049), and a gradual falling off in the imports of all live stock, suggest that our present system of inspection, and the law which prohibits the introduction of any but pure-bred stock, duty free "for breeding purposes," is having the effect designed, of excluding a large number of animals of a class heretofore fraudulently introduced duty free.

The large quantities of hides which are being shipped to the United States from foreign countries, and are admitted free of duty, have caused a great depreciation in the prices realized for hides of domestic production. This has had a marked tendency toward keeping down the price of cattle, and has consequently added to the burdens of our agricultural population. I would therefore most earnestly recommend that the duty provided for in section 3 of "An act to reduce the revenue and equalize duties on imports, and for other purposes," approved October 1, 1890, be imposed in all cases where the countries from which such hides are shipped have not granted equal concessions in regard to the admission of the agricultural products of the United States.

MEAT PRODUCTS ABROAD.

The withdrawal by some of the foreign governments of restrictions which weighed heavily upon one of the most important of our agricultural industries—the animal industry—in response to the prompt and efficient performance by this Department of the responsible duties of inspection imposed upon it by the legislation of the last Congress, is one of the most gratifying features it is my duty to record in this report.

The action of the Governments of Germany, Denmark, and Italy in this regard deserves more than a passing word of congratulation, especially as this course seems likely to commend itself to other nations in Europe with whom we have reason to believe a large trade in this product could be built up. In the first place, it is becoming that the head of this Department should acknowledge in fitting terms, on behalf of his own Department, as well as on behalf of the important interests confided to his care, the warm personal interest ever accorded by yourself to all matters relating to the agricultural industry which I have had occasion to submit for your consideration, and without which this grand result could never have been attained. I should also not fail to acknowledge the cordial coöperation of the Department of State and of those diplomatic representatives abroad who have so intelligently and earnestly presented this subject to foreign governments.

In the second place, I want to emphasize, in referring to this subject, the beneficent effects of the wise extension of the powers conferred upon this Department, as affording not only a most gratifying recognition by foreign governments of the efficiency of the work of the Department, but as furnishing, in my opinion, a striking illustration of one method by which the interests of the farmer can be legitimately fostered by the National Government. It should therefore serve as an incentive to further efforts on similar lines.

INSPECTION OF ANIMAL PRODUCTS.

The interest of our people in meat inspection has been great and has been increasing for years. With the concentration of the great bulk of the slaughtering business in a few large cities, where it is conducted on an enormous scale, the feeling became strong that there should be more rigid supervision for the protection of the health of consumers than was given by the local authorities where the abattoirs were located. This feeling found expression in legislation in various States, designed to secure the inspection of meat introduced from beyond their territory. On the ground, however, that such laws proved to be to a greater or less extent a regulation of interstate commerce, they were in most, if not in all, cases held to be unconstitutional, and the desired object was not accomplished.

In addition to this very natural desire of our own consumers to be protected from all real or fancied dangers to their health, there were to be considered the fears excited abroad by alarming, though unfounded, statements of sensationalists and others interested in injuring our export trade. If we were to keep our foreign markets it became evident that we should not only send to them the very best of meats, but that these should be accompanied by evidence that they had been properly inspected and that the animals from which they came were perfectly sound, and free from any taint and infection.

In the light of these conditions the last Congress passed the act of March 3, 1891, providing for the inspection of live cattle, hogs, and the carcasses and products thereof, which are the subjects of interstate commerce, thereby giving authority for an inspection of animals and meats as comprehensive and thorough as exists in any part of the world. This inspection has been organized in the chief centers of the business, and is being extended as rapidly as possible. The reports of the inspectors have confirmed the statement made in my previous reports that our pork and beef, produced as it is from the meadows and cornfields of a salubrious country, can not be surpassed by similar products from any section of the world.

As is the case in every country, however, there are some diseases affecting food-producing animals in the United States, which make it necessary that this inspection should be maintained for sanitary reasons. The disease known as tuberculosis, which exists in all parts of the world, particularly among neat cattle, is believed to be dangerous to the consumers of the meat and milk of affected animals; and the presence of this disease alone should be a sufficient reason for an inspection which would guard against the sale of the tainted products of such animals. But our people demand something more than protection from communicable diseases. From being long accustomed to markets having a surplus of meats, even our working people purchase the best cuts from healthy animals, and they would not knowingly accept for

food at any price the flesh of animals that were feverish from injuries received during transportation or from any other causes. In other words, the people of this country demand good meat from perfectly sound animals, and they would not tolerate the sale of meats from animals affected with even noncommunicable maladies.

In most, if not all, European countries inspectors, according to their reports, freely pass for consumption the meat of animals affected with foot-and-mouth disease, pleuro-pneumonia, localized tuberculosis, actinomycesis, and similar diseases which, according to the views and customs of this country, must be condemned. But all the meat for the foreign market is inspected the same as that designed for home consumption, and consequently has been much more rigorously dealt with than is the meat produced in the countries to which it is shipped. In this respect, as in others, we have met the objections which have been raised to American products, and have not only removed the cause, but have gone beyond what was asked by our critics.

The meat-inspection law has been to a certain extent misunderstood by people who apparently have not taken into account the peculiar features of our form of government, and who have thought that this Department should have been given specific authority to destroy the carcasses of condemned animals. While such an opinion is gratifying when coming from our own citizens in so far as it demonstrates their interest in a strict enforcement of the law, it seems to have been the conclusion of Congress that such action is beyond the powers of the Federal Government. Being a national law, this is looked upon as a measure for the regulation of interstate and foreign commerce, but not a local police regulation. It provides the means of guaranteeing the wholesomeness of meats shipped from one State to another or to foreign countries, but it does not provide a guaranty as to the condition of all animals slaughtered for local consumption, since the meat from them is in no sense an article of interstate commerce. It is therefore, under the law, the duty, as heretofore, of State and municipal authorities to inspect meat for local consumption and to deal with that which is condemned by the national inspectors as improper for shipment to other States. Nevertheless, in order to prevent any possible cause for objection to the system, this Department has required an agreement to be signed before inspection was commenced at any packing house to the effect that all condemned carcasses should be sent to the rendering tanks, where they are manufactured into fertilizers.

A system of inspection for all articles of food is extremely desirable, and this should, where possible, be conducted by local authorities. This is particularly necessary in the case of milk, which is liable to contain the germs of tuberculosis, and possibly of other diseases. To obviate the danger from this article of food, the dairies should be kept under strict supervision by the local sanitary authorities, aided by the National Government in cases where the dairy is not in the same State

as the consumer, and is, for that reason, beyond the jurisdiction of the local officers who are interested in its wholesomeness.

In connection with the financial side of our inspection work, it is desirable to compare the advantage gained with the cost of the work undertaken. I will not, at this point, go into details, which will be found in the more extended report on the work of the Bureau of Animal Industry under that head. I will simply state here the fact that, short as the time is since the inspection was established, I find the expense to be less than was anticipated, and to have been rapidly reduced, as might have been expected, as the work has been extended. While in the aggregate it will amount to a considerable sum, requiring a largely increased appropriation for the work of the Bureau, it will, I am sure, be less than most people would naturally expect in view of the enormous amount of work involved. As to the advantage gained, it can only be justly estimated by tracing the development of our foreign trade in animal products, especially in pork, during the ten years prior to the date when the prohibition on these products was enforced by European countries; and comparing that with the development during the past ten years while the prohibition was in force, the inference is a natural and perfectly just one, that without such obstacles in the way of this trade, its growth during the ten years just elapsed would have continued on the same scale as for the ten years previous.

A presentation of these figures shows, referring only to our pork products, that of these there was exported in 1871, \$12,429,000, a sum which had increased in 1881 to over \$69,000,000, exclusive of lard, which is not taken into account, as it has never been included in the prohibition. Instead of an increase since 1881 up to the present time, we find a great reduction, the exports for the fiscal year ending in 1891 aggregating but \$50,494,375. It is a natural inference that the prohibition against these products by European countries caused our pork raisers last year a loss of foreign trade of about \$20,000,000. As against the annual expenditure then for meat inspection, it is reasonable to expect a gain in trade at least equal to the annual loss imposed upon our pork raisers during the past ten years by the prohibition which efficient meat inspection can alone remove, and which for the whole ten years will aggregate over \$260,000,000.

The condition of our live cattle and meat products is so satisfactory as to make all existing restrictions, such, for instance, as that imposed on our live cattle by the British Government, a grave injustice, working a grievous loss yearly to the agricultural classes in this country. We have a system of inspection of every live animal coming into this country, which, in addition to the absolute control exercised by this Department over communicable animal diseases in this country, enables us to offer the most perfect guaranty against the transmission of communicable diseases of cattle to other countries through the shipment of cattle from the United States. We have shown in all respects a will-

ingness to undertake any responsibility and to enforce any regulation of a reasonable nature which the prejudices or experiences of foreign countries suggested, and, as has already been explained, we are, in the matter of inspection, more rigid and thorough than our friends on the other side of the water. The complaints of ill treatment of animals on board ship have been met by the passage of a special law authorizing the officers of this Department to inspect every vessel loading cattle in American ports, and to enforce such regulations as in the opinion of the Secretary of Agriculture are essential to the proper care and good treatment of the cattle in transit.

As regards the possibility of danger to cattle abroad from Texas fever, while the increased powers which I shall ask for for the regulation of the Southern cattle trade in this country will, I am convinced, enable me to prevent any cases of Texas fever among cattle shipped abroad, still, it should be remembered that there is no possibility of this disease being conveyed to foreign countries, it being well known that while Southern cattle communicate the disease to Northern animals, these latter do not further spread the disease. We have convinced every reasonable man in Great Britain, as the result of the double check established by me something over a year ago, by which every animal shipped across the water is tagged and numbered so that it can be identified and its antecedents and history traced on this side, and by which it is duly inspected on arrival in Great Britain by inspectors detailed for that purpose from the force of the Bureau, that there is not an iota of danger to British cattle from contagious pleuropneumonia attributable to our live cattle exported. But three allegations of cases of this disease among American cattle landed in Great Britain have been cited by the British authorities, each of which was disputed by our American inspectors, and in only two cases of them did the British authorities adhere with some firmness to their diagnosis. Thanks to our system of identification, these two cases were traced in the manner I have indicated, and in every particular their life history sustained the diagnosis of our inspectors, which was, I should say, supported by many of the leading veterinarians in Great Britain at the time.

More recently, I am pleased to say, confirmation of our position in these cases, furnishing a triumphant vindication of our American inspectors, has been offered through the columns of a leading veterinary journal in Great Britain by the man who stands beyond dispute at the head of the veterinary profession in that country, and who confirms in the strongest manner our contention of the occasional existence of a disease of a pneumonic, but noncontagious, character among our cattle shipped abroad, as the result of exposure from a transatlantic journey in the winter, and he furthermore shows that in analogous cases among cattle landed in France and investigated by the leading French veterinarians our position was sustained and the disease pronounced

noncontagious, even without the intervention of an American inspector. These facts, in my opinion, would amply justify this Government in making to the British Government the strongest presentation of the grievance which our cattle-raisers suffer unjustly at their hands, by reason of the arbitrary regulations enforced against our American cattle in British ports owing to an alleged dread of contagious diseases, coupled with an urgent demand for the removal of obstacles which we have clearly shown to be useless, and the maintenance of which can only be regarded as an evidence of unfriendliness. Justice as well as proper self-respect demand such a course.

Unless we can secure from the British Government the removal of the unfriendly restrictions now bearing so hardly upon our cattle trade, I shall feel it to be my duty to suggest the rigid enforcement of the law now in existence prohibiting the import into the United States of all live animals, a law which has only been suspended as a matter of friendship to foreign governments. That we have far more justification for the exclusion from the United States of all animals coming from Great Britain and its dependencies than they have for the interposition of any obstacles to our cattle exports from the United States, is shown by the recent report of Prof. Brown, the veterinarian of the British Privy Council, who admits in the plainest manner that no hopes exist in that country of ever absolutely suppressing pleuro-pneumonia, and shows, indeed, that such measurable success as he has faint hopes of attaining in the control of it is to be obtained only by methods which are nothing more than those adopted by ourselves and to which, promptly and vigorously enforced, we owe our present success in the complete control of this disease.

MARKETS FOR AMERICAN FARM PRODUCTS.

Already those laws under which you have been able to enlarge so wisely the channels of foreign trade as the result of reciprocal concession hold out to American agriculture hopes for such a demand for our agricultural products as would have been deemed but a few years since absolutely chimerical. Recognizing the importance of these measures and the extent of the opportunity thus afforded us, I have already sought to furnish the country with the fullest information obtainable in regard to the agricultural resources of other countries and the probable character of the demand which it may be in our power to supply. My facilities for carrying on this work, based on appropriations estimated for when comparatively little opportunity existed for the furtherance of such plans, have been necessarily inadequate, but the necessity of extending work in that direction is so obvious, and the advantages to be obtained by its maintenance and development so great, that I feel confident of encouragement in the way of liberal appropriations for carrying on all the work which I have planned for this Department in the development of our markets abroad.

In furthering the interests of our agricultural products in foreign countries it is especially desirable to propagate by every legitimate means a knowledge among the peoples of foreign countries of our own resources and our own facilities for supplying their wants. Our largely increased facilities in the way of transportation must be accompanied by a freer intercourse, which will teach them the value of our products for their own wants. It will not do for us to overlook the fact that in every foreign country to which we look for the disposal of some of our surplus products we will necessarily meet with a class or classes whose interests will clash, or seem to clash, with ours. In cases where this is only imaginary, the imagined obstacles can only be done away with through a better knowledge among those people of the conditions of agriculture among us, while in the cases where a real competition exists we shall find ourselves obliged to combat not only legitimate competition, but an antagonism which will seek to create prejudice in the minds of consumers against American food products. This can be met only by addressing ourselves directly to the consumers in these foreign countries, whose real interest lies in obtaining desirable supplies of a satisfactory character and at reasonable prices. When once we succeed in inspiring the majority of consumers in any country with confidence in the character of our products and to convince them of the availability for their use of what we have to sell, the antagonism of a single class in a community will be unable to successfully oppose our efforts for a share of their trade. A striking example of the benefit of adequate representation abroad in the interest of agriculture is afforded by the work of our American inspectors of live stock in Great Britain, to which reference has already been made.

CORN IN EUROPE.

A further example of this kind has been furnished by the intelligent and earnest work of the special agent whom I appointed something over a year ago for the purpose of introducing our corn products to the attention of the people of Europe as a nutritious and economical substitute for other cereal foods. The disposal of this, one of our largest crops, abroad has been fitful, being utilized by foreigners almost exclusively as a cattle food, and its extent consequently depending not so much upon any demand abroad as upon its cheapness with us. Hence in years of large production, while the amount exported has shown an increase, it has been at prices inadequate to insure a profit to the producer, while a rise in price, consequent upon a small crop, has always greatly reduced the exports. The efforts of our special agent have been devoted to an attempt to disseminate as widely as possible a knowledge of the various preparations from Indian corn, so popular in this country as human food, and adapted, as all Americans well know, to provide a cheap and inexpensive diet for the poor, as well as to furnish the table of the rich with many delicate and palatable dishes. In

this he has been, in my opinion, rarely successful. It is true that his work has been, until recently, principally confined to Great Britain, in which country he has been greatly aided by the existence in almost every town of any consequence of cooking schools, whose teachers have shown themselves most ready to receive his instructions and adopt his suggestions. Charitable societies and boards intrusted with the care of public institutions have also greatly assisted him in his work.

A report of his work in Great Britain has been received, and will be shortly published, together with a chapter prepared by the chemist of the Department on the chemical composition of corn and its value for food purposes by comparison with other cereals, and also a statistical chapter giving the figures of our corn area and product for a series of years, with prices, proportion exported, etc. This work has attracted much attention in this country, and many of our influential citizens have shown a disposition to further his efforts by all legitimate means, while one of our public-spirited German-American citizens proposes to establish in Berlin, for the benefit and instruction of his countrymen in the uses of Indian corn and its preparations, a practical school of instruction, or corn kitchen. Some time ago, when it became apparent that there was a considerable shortage in the rye crop of Europe, I sent our agent, Col. Murphy, to Berlin with instructions to visit not only Germany, but other countries as well, in which an opportunity existed for his work, for the purpose of taking advantage of the short rye crop and the high prices of other grains, to introduce to the attention of the people on the Continent the availability of corn meal and other corn preparations as a substitute, or at least an adjunct to the wheat and rye foods common among them. He has already succeeded in calling the attention of the German Government to the availability of this cereal as a part of the army rations, it having been found that an excellent mixed bread of rye and corn can be made far more cheaply than bread from rye alone.

DISPOSAL OF SURPLUS CROPS.

It is not to be inferred that because I lay such stress upon the extension of the market for our agricultural products abroad, I overlook the fact that our exports of agricultural products, large as they are, form but a comparatively small percentage of the total crop. This I fully appreciate, and that portion of this report devoted to a general review of the work of this Department in our own country will furnish sufficient proof of this fact; but I realize also that, with our marvelous facilities in the way of agricultural production and our wonderful diversity of soil and climate, and the extent of our territory, we must for many years expect to raise a surplus of many kinds of crops, and in most cases the profitable disposal of this surplus means not only the maintenance of a balance of trade in our favor and many millions of dollars paid to our farmers by foreign consumers, but it must always have a sensible effect

in maintaining remunerative prices for the large proportion of the crop consumed at home.

THE MIDDLEMAN.

In considering the wants of our farmers in relation to the home market, the opportunities for extended observation in relation to prices of agricultural products which the duties of my present position afford me have confirmed me in the strongest manner in my previously formed impressions in regard to the excessive difference between the prices paid for agricultural products in the market by the consumer and those paid on the farm to the producer. This is a serious evil, enhancing the cost of living to our people, while it depreciates the value of our crops to the farmers. A large share of this difference in price is to be attributed to the handling of the product from the time it leaves the farm until it is delivered to the consumer. The condition of our farmers living in the country away from a market center and obliged often to spend an entire day in order to deliver one load of produce at the nearest market or station, and the general tendency of our people to transact business in the quickest way possible, gives to the middleman a prominence and an influence greater than he probably possesses in any other country.

To provide an adequate remedy for this evil is not an easy task, but there is one thing which can be done for the benefit of both producer and consumer, and this duty clearly devolves upon this Department. It is, to keep the public thoroughly informed on the matter of prices of all important farm products. Doing business daily at a market center, the middleman knows what prices he can obtain, and his rule in purchasing—to get the goods he deals in as much below that price as possible—is greatly subserved when he deals with a seller ignorant of the true value of his goods. My earnest efforts have been directed to placing promptly in the farmer's hands the fullest information in regard to the market values of his wares, which will at least save him from the penalty of ignorance and the unscrupulous greed of traders. To extend this work until every farmer in the country may know before he markets his goods just what their value is in the nearest market, is my earnest desire and intention.

DIVERSIFICATION OF CROPS.

In regard to our home market, our chief dependence for its development beyond present limits must be, as I have previously taken occasion to state, in such a diversification of our agricultural products as will enable the American farmer to supplant the foreign one in supplying a large proportion of the agricultural products which we now import. In reviewing the agricultural imports of the past ten months, and noting with satisfaction the effect upon some of them of our present tariff law, it was, nevertheless, strikingly apparent that many

of the agricultural products imported were of a character which could be, and should be, produced in this country.

HOME-GROWN SUGAR.

With regard to the most important of these—sugar—the efforts of this Department afford much encouragement for a home-grown sugar product. The results of the work of the experiment station established in the interest of beet sugar may be regarded as eminently satisfactory, and with regard to sorghum I am happy to be able to state that the process known as the alcohol process, perfected in the chemical laboratory of this Department last year, has, on being tested in the practical manufacture of sugar, answered all reasonable expectations. It is found to so greatly facilitate the extraction of the sugar from the cane as to practically double the yield obtainable by the methods heretofore employed, and this at an increase of cost so trifling as to be practically insignificant. There seems to be no reason why we should not, therefore, look forward with confidence to the day when the one hundred millions of dollars paid by Americans to foreign sugar producers should be turned into the pockets of our own people.

TRANSFER OF THE WEATHER BUREAU.

In all efforts toward diversification in our home-grown products, climatic conditions must be well understood and considered, and in this connection the importance and value to the agricultural interests of the control by this Department of the Weather Bureau can not be exaggerated. On the 1st of October I called upon the Chief of the Weather Bureau, appointed by you July 1, for a special report covering the first three months of his administration of the office, in order that the public might understand the trend of the plans upon which we have agreed for the purpose of enlarging and extending the work of the Bureau, especially in aid of our agricultural interests. Such a report was duly prepared and is now in print, and while the time has been too short to speak of tangible results, the report, nevertheless, shows very clearly the extension of the work in the direction indicated. It is further to be noted with gratification that the transfer of the Bureau to this Department has been generally received with great satisfaction. There has been a truly remarkable development of interest in the work of the Bureau, resulting in a great increase of stations—from 600 to 1,200—as well as of voluntary observers throughout the country, these numbering 2,200, an increase in three months of 400.

At the recent meeting of the Association of American Agricultural Colleges and Experiment Stations, Prof. Harrington bespoke their coöperation in meteorological work, and his suggestion, I am glad to say, was met with a hearty and prompt response, resolutions being adopted expressive of the sense of the association that every college and station should coöperate in the work, and that the closest relation

should be established between the Weather Bureau and such institutions. I take this opportunity to congratulate you upon the selection made for the important post of Chief of the Weather Bureau, and to express my appreciation of the earnest manner in which Prof. Harrington is laboring for the improvement of the service in perfect sympathy with the lines suggested by me in my last Annual Report.

FARMERS AND THE DEPARTMENT.

The demand which exists for more frequent and intimate intercourse between the farmers and the Department can not be met altogether by the issue of bulletins. The printed document, however valuable, may be interesting and instructive, but can never take the place of personal contact. The intercourse between the Department and the farmers should be reciprocal and not one-sided, and such an intercourse can only be cultivated by the frequent participation of representatives of the Department in the meetings of the numerous agricultural societies and farming associations, at which the farmers themselves are present to discuss the means necessary for the improvement of agriculture. I am happy to say that the need for closer relations of this character seems to be appreciated quite as much by the farmers as by myself, as the increased demands for the representation of the Department at meetings of that description amply testify; indeed, they far exceed my ability to comply with them. I trust that in the near future my facilities in this respect may be greatly enlarged. The general and growing interest shown by all classes in this country in the cause of agriculture and in the work of this Department is becoming daily more manifest. It is seen in the attention devoted to the work of this Department by the public press, including many of the leading magazines of the country, to whose pages a few years ago the subject of agriculture was practically an entire stranger. It is to my mind a most hopeful sign that the minds of Americans generally, especially of those who are devoted to other pursuits, should be inclined to give to agriculture the attention it deserves, and to acquaint themselves with its needs and condition. In connection with this subject I desire to call attention to the interesting series of meetings of various scientific associations in Washington this past summer.

IMPORTANT MEETINGS.

During the months of August and September there were convened in the city of Washington ten scientific associations, in whose work this Department has a large interest, viz: The American Microscopical Society, the Association of American Agricultural Colleges and Experiment Stations, the Association of Official Agricultural Chemists, the Society for the Promotion of Agricultural Science, the Conference of American Chemists, the Association of Economic Entomologists, the American Association for the Advancement of Science, the Geological

Society of America, the International Congress of Geologists, and the American Pomological Society.

Never before in the history of the United States has there been such a convention of scientific students in any one place. Their researches cover almost every phase of scientific inquiry and are full of practical results in almost every branch of domestic economy and human industry, while, as the names of many of them indicate, a large majority of them are devoted especially to the consideration of subjects entering directly into the domain of practical agriculture, and in every one of them, I am gratified to be able to state, questions of vital interest to agriculture received ample consideration. As a natural consequence, the scientific force of the Department had occasion to participate, in some cases largely, in the deliberations of these important associations, and to enjoy the inestimable advantage of personally meeting and conversing on subjects related to their own work with the leaders of scientific thought and research in the country. Moreover, I was especially gratified over the fact that at these gatherings the representatives of the Department were treated with a consideration that fully indicates the appreciation in which the work of this Department is held by the scientific world. In this connection it is proper to acknowledge the great value to agriculture of the six lectures delivered at that time by Mr. R. Warington, F. C. S., before the Association of American Agricultural Colleges and Experiment Stations, as the representative of the agricultural experiments of Lawes and Gilbert, at Rothamsted, England. Mr. Warington was the first representative of Rothamsted under the new trust of Sir John Bennet Lawes to Rothamsted, which provides that a representative shall visit America every three years as an exponent of Rothamsted and its work. Mr. Warington met a most cordial welcome, not only from this Department, but from all the leading agricultural scientists in attendance upon the meetings of the association. The lectures were of such high merit that I have authorized their publication by this Department as a portion of the proceedings of the association.

COÖPERATIVE WORK.

Before leaving this subject I desire to express my conviction of the necessity for a closer coöperation between the various educational forces which already exist in this country for the advancement of practical agriculture. The thread which connects this Department with the agricultural colleges and stations, themselves to-day recipients of the national bounty to the extent of considerably over a million and a half dollars annually, is a very slight one. It seems to me desirable that, without in any way limiting the independent action of these several State institutions, the connection should nevertheless be greatly strengthened. These institutions have themselves felt the need for coöperation, and deserve the credit for being the first to adopt some systematic method of attaining it, but this effort is limited to them.

selves. In addition to these institutions we have some individual, or board of individuals, representing in a special manner the agricultural interests of the State, and we have, moreover, State and national societies devoted to the improvement of stock, to the interests of horticulture, dairying, and other specialties in the line of practical agriculture, together with the institutes established and endowed by law in several States. The efforts of this Department will be directed to an extension of some system of coöperation between these various forces by which each in its proper sphere may work to the best advantage, and each be enabled to derive practical aid and benefit from the others.

INTERNATIONAL ASSOCIATIONS.

Three meetings having close relations to agricultural interests have also been held in Europe during the past summer, and in accordance with the earnest desire expressed to you in my last report, that the United States should be represented at such international gatherings, I designated Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, to represent this Department at two of them, namely, the International Congress of Hygiene and Demography held in London, August 10-17, and the International Congress of Agriculture, held at The Hague, September 7-12. The selection of Dr. Salmon to represent this Department at the first named was due to the fact that the congress devoted a large part of its attention to the relations of the diseases of animals to those of man, one section being assigned exclusively to the consideration of this important subject.

It gratifies me to be able to inform you that our representative was received at the congress with every mark of consideration, he having been elected an honorary vice-president of the section referred to on receipt of my advice of his appointment, and before he had even presented his credentials. He was also made a member of the foreign council of the section. His being in Europe, together with the fact that two of the important sections of the International Congress at The Hague, the third and the sixth, were devoted to subjects which, in this country, are assigned especially to the Bureau of Animal Industry, determined his appointment as a representative of this Department at The Hague congress also. The same flattering evidences of consideration were accorded to him as a representative of this Department at that congress, of which he was elected first vice-president, a distinction especially honorable in view of the fact that he was, I regret to say, the only representative from this country. I am satisfied that his presence there was in many respects most advantageous to our interests. The mere fact that he would be brought into personal contact at these gatherings with men who, in the several countries of Europe, are called upon to act as the scientific advisers of their respective governments in matters relating to agriculture, and especially in such matters as legislation against contagious diseases, inspection of food products, etc.,

would, of itself, in my opinion, amply justify his mission; indeed, I might say it was essential to our interests that he should be there.

The third association referred to above was the International Meeting of Meteorologists held at Munich August 11, at which this Department was represented by Prof. Mark W. Harrington, Chief of the Weather Bureau, and Prof. Cleveland Abbe, one of his chief assistants. In the annual report of this Department, which will go to press before the close of the year, I hope to include valuable reports in reference to all these meetings. I may say now, however, that this year's experience, and the practical effort made to secure adequate representation at meetings of this description of an international character, absolutely confirm me in my convictions already expressed to you, of the necessity of ample and intelligent representation of American agriculture on these occasions. I understand that the next meetings of these associations (they occurring biennially) will fall in 1893, and I regret that no one was authorized to extend to them an invitation to select this country as the place and the Columbian Fair as the occasion for their next meeting. I understand that there was an evident feeling at these gatherings in favor of meeting in 1893 in this country, and, further, that the decision of this question was left to the permanent executive committee. It is possible, therefore, that steps might still be taken to accomplish this end.

BUREAU OF ANIMAL INDUSTRY.

The passage by Congress of the act providing for the inspection of live stock and their products, approved March 3, 1891, and the act providing for the inspection of vessels carrying export cattle, approved March 3, 1891, has so increased the work of this Bureau that I found it absolutely necessary to divide it into four divisions, viz, the Division of Inspection, the Division of Animal Pathology, the Division of Field Investigations and Miscellaneous Work, and the Division of Quarantine.

To the Inspection Division was assigned work largely of an executive character, which covers the eradication of contagious diseases, the inspection of export and import animals, meat inspection, vessel inspection, and the regulation of the movement of Southern cattle.

ERADICATION OF PLEURO-PNEUMONIA.

At the time of my last report contagious pleuro-pneumonia existed in two districts in the United States, viz, on Long Island, State of New York, and in the county of Hudson, State of New Jersey. During the present calendar year but four herds have been found infected with this disease on Long Island, the last herd having been discovered and slaughtered on April 30, 1891. Six months have therefore elapsed since the finding of any cases of the disease in this district, and I am

satisfied that our efforts there in extirpating contagious pleuro-pneumonia have proved successful.

There still remains a small district in the State of New Jersey from which the infection has not been completely eradicated. The work there, however, is being pressed forward with the greatest possible energy, and I confidently expect that before the end of the present fiscal year I shall be able to announce the complete eradication of this virulent and destructive disease from the United States.

With only one small district infected, with this territory in strict quarantine, and with all herds promptly slaughtered when disease is discovered, there is no longer justification for any restriction whatever by the government of any country against the importation of cattle from this country.

INSPECTION OF EXPORT ANIMALS.

The inspection, by American veterinarians, of our cattle landed at the foreign-animals wharves in Great Britain has been continued during the present year with the most gratifying results. The total number of animals inspected by them from the time they began their work to September 19 of the present year was 374,415 head of cattle and 10,959 head of sheep.

The inspection of export animals in the United States has also been continued since my last report under the provisions of the act of Congress of August 30, 1890, and covers the inspection of animals at interior stockyards, the tagging of animals at these points with numbered metal tags, and the obtaining of a history of the animals at the time of tagging, the reinspection of these animals en route and at the port of export, and the loading of the same on board vessels. Since the commencement of this work 311,146 cattle and 15,373 sheep have been inspected, as provided by our regulations, up to October 1, 1891, making a total of 326,519 head of animals inspected.

Of these numbers—

	Cattle.	Sheep.
Great Britain received.....	300,862	13,714
Germany received.....	4,354	
France received.....	4,336	1,576
Belgium received.....	1,594	
Australia received.....		42
Cape Colony received.....		41
	<hr/> 311,146	<hr/> 15,373

The exports of cattle for the fiscal year ending June 30, 1891, show a decrease of 3½ per cent compared with the exports for the fiscal year ending June 30, 1890. The total exports for 1891 amounted to 362,402, as against 372,690 for the preceding fiscal year. The cause for this decrease in exports is undoubtedly due to the increase in prices of cattle in this country during the latter part of the fiscal year; cattle bringing

in June, 1891, from \$1.25 to \$1.50 per 100 pounds more than in June, 1890.

The excellent impression which our cattle have made in Germany is shown by the following extract from an article which appeared in the German Agricultural Press (*Deutsche Landwirtschaftliche Presse*), Berlin:

On July 20, 139 head of cattle from the United States arrived at Hamburg; most of them oxen. On August 1 a similar shipment arrived, and on August 3 the steamer *Sorrento* landed 240 head; after a thorough inspection the cattle found ready buyers, and were mostly sold to butchers in Hamburg and Altona. They were killed after they had undergone another careful inspection in the public slaughter-houses. The quality of the cattle was excellent; all of them were young and well fed, and they had suffered but little during the time of transportation. It therefore can not be surprising that the prejudice that existed against American cattle by the butchers in Germany is gradually disappearing, and American cattle are preferred. The meat is excellent, as may be expected of cattle that were raised on the meadows. Bulls are less in demand.

The cattle show that the Americans take great pains in raising good stock, and it seems that the high prices they give in England for the best stock of cattle for breeding purposes repay them well. The most of these cattle are Shorthorns, some Scotch "Angus," and also Devonshire and Herefordshire; in short, those kinds of cattle which we see at the large cattle shows in England.

In comparison with the German cattle, it seems that the Americans succeed in giving their cattle a broader and deeper front, deeper and more complete hind-quarters, as well as a strong and straight back; in one word, the cattle have a fine appearance and make a favorable impression. The head is well and nobly shaped, but the horns, which are an ornament to the cattle, are mostly cut off. This seems to be a widespread practice in America, and that cruel operation generally takes place before the cattle are one year old, so that when the cattle are two or three years old one can hardly recognize even a stump of the horns. No doubt it is an advantage when cattle are to be shipped and many of them are loose in one compartment.

Whether the import of cattle from America will reach large dimensions remains to be seen, but it deserves the closest attention of our agriculturists and stock-raisers.

What the extent of the importation of cattle from America may be is seen by the export to England, where during last year in Deptford alone about 300,000 head of cattle were landed from the United States.

INSPECTION OF IMPORTED ANIMALS.

The act of August 30, 1890, provides for the inspection of all imported cattle, sheep, and swine arriving in the United States. This work was inaugurated by the Department immediately after the passage of the act, and has been continued in accordance with our regulations. Inspection stations have been established along the Canadian border, and three quarantine stations are maintained along the Atlantic seaboard. At the beginning of this work stations were established along the Mexican border, but since the increase in tariff duties on imported animals no importations of cattle, sheep, or swine were made into this country from Mexico, and for this reason these stations were discon-

tinued. The total number of animals inspected since the commencement of this work, imported at our Canadian stations, was 2,456 cattle, 129,390 sheep, and 54 swine. Of this number 169 cattle, 2,680 sheep, and 54 swine were imported for breeding purposes. At the quarantine stations on the Atlantic seaboard there were imported and quarantined for ninety days 46 cattle, imported for breeding purposes, and 1,698 sheep, and 70 swine, quarantined for fifteen days.

Owing to the failure of the Dominion of Canada to provide for the quarantine of sheep arriving in that country from countries infected with foot-and-mouth disease, I found it necessary, on the 19th of May, 1891, to order the quarantine of all sheep and swine imported from Canada into the United States for a period of fifteen days. Sometime thereafter, by order of council, a quarantine of fifteen days was established on all sheep and swine imported into Canada from Great Britain or the continent of Europe, and consequently, on June 25, 1891, I rescinded my order above referred to.

The only contagious disease found among imported animals at our quarantine stations during the past year was among a shipment of twenty-two Southdown sheep from England which entered at our quarantine station at Garfield, N. J., in which shipment were eleven animals affected with foot rot. This shipment was detained in quarantine until this disease had entirely disappeared. The only other instance of disease occurred in a shipment of sheep from Canada, imported at Island Pond, Vt., in which were found five cases of foot rot out of a shipment of 102 head. These were handled in the same manner as the sheep found diseased at Garfield.

VESSEL INSPECTION.

Under the act of March 3, 1891, this Department was empowered to regulate the fittings of vessels carrying export cattle from this country to foreign nations, and on June 6, 1891, I made such regulations as in my judgment would promote the better carrying of cattle, the more humane treatment of the same, and insure their arrival in better condition at their points of destination. I am happy to say that the various steamship companies engaged in this traffic have very cheerfully accepted these regulations, and, at considerable expense, have remodeled their vessels so as to comply therewith. The result, so far, of the vessel inspection regulations has been to materially reduce the losses resulting from lack of ventilation, overcrowding, and weak fittings. The carrying trade has thus been greatly benefited by these regulations, and hereafter losses from the causes just mentioned will be reduced to a minimum, and the objections to the transatlantic trade in live cattle entirely overcome. The total number of vessels examined since July 1, 1891, has been 215; 98 sailed from the port of New York; 52 from Boston; 42 from Baltimore; 15 from Philadelphia, and 8 from Newport News.

MOVEMENT OF SOUTHERN CATTLE.

The mildness of last winter made it necessary to undertake the control of Southern cattle coming to Northern markets at an earlier period than for the preceding year, and on February 5, 1891, I issued the necessary order regulating the movement of cattle in this branch of our interstate commerce. The quarantine line of the present year was extended from the Mississippi River east to the Atlantic Ocean, conforming as nearly as possible to the line of permanent infection by this disease established as a result of the investigations published in the report of the Bureau of Animal Industry for the year 1884.

Some idea of the amount of work done by the Bureau in supervising the movement of Southern cattle may be had from the fact that the total number of carloads of cattle which were separated and kept distinct in course of transportation amounted to 40,542, containing 1,051,626 head of Southern cattle.

It was not possible during the present season to maintain as rigid an inspection of the work of disinfecting cars, performed by the railroad companies, as was necessary to insure absolute safety in this traffic. The Department was compelled, in a measure, to rely upon the railroad companies for the observance of this part of the regulations, and for the thoroughness of the work. While a large number of the railroad companies cheerfully complied with the regulations and endeavored to carry them out thoroughly, I regret to say that others were careless in attending to this matter. The consequence, therefore, has been that while the outbreaks of Texas fever or Southern fever have been greatly diminished during the present season, they have still occurred in some parts of the country, and a few cases of the disease have been found among export cattle.

I have, therefore, to renew the recommendation made in my last report, that legislation be asked of Congress which will render possible the strict enforcement of the regulations for cleaning and disinfecting cars that have carried infected cattle. At present there is no penalty or provision of law by which railroad companies can be held to a strict compliance with this rule, and the only means at the disposal of the Department for securing this is to refuse to certify export cattle for clearance in cases where the regulations are disregarded. If the country is to be kept free from this disease it is necessary that specific power should be given this Department which will enable it to secure obedience to these regulations by all common carriers, whether they are interested or not in the export trade.

MEAT INSPECTION.

In prescribing regulations for meat inspection under the act of March 3, 1891, I made provision for a microscopic examination of hogs at the time of slaughter in order to certify that the same were free from the

animal parasite called *trichina spiralis*. In addition to the provisions for microscopic inspection of pork, the regulations provided for an examination, before and after slaughter, by veterinary surgeons, of all animals slaughtered for export or interstate trade, the condemnation of animals found to be diseased, and the proper identification of the carcasses and other products which enter into these two classes of our commerce.

Meat inspection was instituted under these regulations on May 12, 1891, in New York, N. Y., and was confined to the inspection of export dressed beef. At the beginning of June, 1891, this work was inaugurated in Chicago, and immediately thereafter at South Omaha, Kansas City, Jersey City, and Hammond, Ind. Microscopic examination of hogs was commenced in Chicago on June 22, 1891, and later at Milwaukee, Omaha, Kansas City, and Boston. From the beginning of this work to the 1st day of October, 1891, there have been a total of 1,016,614 animals inspected both before and after slaughter. Of this number 844,581 were cattle, 15,330 calves, 93,331 sheep, and 63,372 hogs. There were 373,149 quarters of dressed beef tagged for export and 2,009,462 for interstate trade. In addition, 379,872 packages of canned, salted, and smoked meats were stamped in accordance with the regulations. There were 63,372 carcasses of hogs examined microscopically. The total number of animals condemned and sent to the fertilizing tanks was 1,976.

COST OF THE WORK.

It is exceedingly difficult to estimate the cost of the new branches of work undertaken by the Bureau of Animal Industry during the past year. This difficulty is increased by the fact that the amount of work done each month and the cost of the same fluctuates with the demands of commerce for our cattle and their products.

The work of inspection of export animals provided for by the act of Congress of August 30, 1890, has now been in operation for about ten months. The average cost of this character of work during this period has been at the rate of \$8,500 per month. During certain months it has gone as high as \$10,279 and has fallen as low as \$7,400. As an average, I should estimate that the cost of export-cattle inspection, which covers the work at interior stockyards, tagging, recording, and inspecting at the foreign animal wharves in Great Britain, would be \$100,000 per annum.

The cost of maintaining the supervision of the movement of Southern cattle was at an average expenditure of \$2,275 per month, or for the ten months during which the regulations are enforced \$22,750. If a sufficient number of inspectors are employed to see that all cars are properly disinfected and that the regulations are enforced at all stockyards the annual expenditure will probably reach \$30,000.

The inspection of import animals arriving in the United States from Canada amounts to \$775 per month, or \$9,300 per annum.

The work of meat inspection has only been fairly in operation since the commencement of the present fiscal year. The cost of the inspection of animals and carcasses in this work during the month of July, including the tagging of quarters of dressed beef going into the export and interstate trade and the stamping of packages of canned and salted beef and pork products, amounted to 5.7 cents per head for each animal inspected, making a total, for 195,664 animals in the month of July, of \$11,160.71. This cost was reduced in the month of August to 4.75 cents per head, being a total number of 295,250 animals inspected at a cost of \$13,981.39. A still further reduction in the cost of the work was accomplished during the month of September, when 438,593 animals were inspected at a cost of \$14,200, an average of $3\frac{1}{4}$ cents per head. I am of the opinion that the inspection of animals and their marking for identification may be accomplished for a sum not exceeding 3 cents per head.

The figures given above do not include the cost of the microscopic inspection of hogs. This latter branch of the work has not been in operation long enough to be properly estimated for. It was necessary at first to educate examiners in the performance of their duties, and some little time was required to enable them to become proficient and rapid in their examinations. Another difficulty arose from the fact that several abattoirs which are being supplied with this character of inspection do not keep our examiners supplied with the quota of samples designated in their applications for this inspection. The cost of microscopic inspection during the month of July amounted to $20\frac{1}{2}$ cents per hog. The cost of the same work during the month of August was reduced to $13\frac{1}{2}$ cents per hog. Taking fifty animals as the average examined by each person, the cost of inspection would be about 5 cents per animal.

The demand for this inspection by the various packing and slaughtering establishments throughout the country is on the increase. Twenty-seven establishments are now having their products inspected, and there are a number of other applicants with whose requests I have not been able to comply, as the appropriation for the Bureau of Animal Industry is too small to justify extending this branch of work. I earnestly recommend that Congress be asked to make an appropriation sufficiently large to enable us to extend this inspection to all applicants. Doubtless this branch of work was not considered by Congress at its last session in making the appropriations for the Bureau of Animal Industry, as the bill providing for it was not passed until the closing days of Congress. The benefits which have already accrued by the opening up of the foreign markets to pork products, the increased demand for beef products, and the reestablishment of their reputation for wholesomeness and soundness in the markets of the world, together with the protection which this inspection furnishes to our own consumers, amply justify a liberal appropriation.

DIVISION OF ANIMAL PATHOLOGY.

The Division of Animal Pathology, as at present organized, covers all investigations in regard to the nature, prevention, and treatment of animal diseases. During the summer considerable time had to be spent in fitting up the new laboratory provided for by the last Congress and in transferring apparatus to it. Though experimental work was not stopped at any time, it was more or less interfered with during July and the latter part of August. The new quarters are superior to the old in every particular, and are well provided with apparatus and modern appliances for this class of investigations.

The investigations of Texas fever have been continued during the summer. The results of the experiments confirm the conclusions of 1890, throwing new light upon the nature of the disease and strengthening the hope that its means of transmission will soon be fully understood.

The work on swine diseases has occupied the attention of the division throughout the year. A special report on swine plague was prepared with great care, which gives in detail the work done by the Bureau since 1886 in different parts of the country.

Inoculation as a means of preventing the diseases of animals, the different forms of pneumonia in cattle, and tuberculosis are among the subjects which have been carefully studied.

The investigation of animal parasites is being actively prosecuted with reference to our domesticated animals. These parasites are responsible for a large amount of harm, which is becoming more apparent by patient research. The material for a report on the animal parasites of cattle is now being collected.

Other diseases are being investigated as time and opportunity offer, and valuable work is being done in determining the essential cause of animal plagues.

DIVISION OF FIELD INVESTIGATIONS AND MISCELLANEOUS WORK.

A corps of inspectors is constantly employed in making investigations as to the character, etc., of reported outbreaks of contagious diseases in various States. As an example of the necessity and importance of such work, it may be stated that an unfounded rumor of the existence of foot-and-mouth disease was recently published in Pennsylvania in spite of the lesson derived from our experience in the West last year. Upon careful examination, however, it was demonstrated, as in the latter case, that this was not foot-and-mouth disease, nor a contagious disease at all. The contradiction in this case followed the rumor so quickly that it is hoped no evil consequences to our cattle interests will ensue, but such unfounded rumors are as dangerous as they are inexcusable. There has been less disease of all kinds than formerly among our animals, and happily many of the contagious diseases common or occasional in other countries do not exist at all with us.

I take pleasure in calling your attention to the great value of, and unprecedented demand for, the Special Report on Diseases of the Horse, written by the most eminent veterinarians of this country, and issued by my direction. If we may judge by the character of letters received commending this publication, it is within bounds to say that it is worth the entire sum appropriated to the Department of Agriculture.

QUARANTINE DIVISION.

Stations securely inclosed, and provided with suitable sheds, yards, and conveniences for the care of stock, have been maintained for the ports of Boston, New York, and Baltimore. Cattle brought to these ports have been quarantined for a period of ninety days from the date of arrival at the station. Although the number of cattle imported during the year has not been large, the quarantining of them has been a necessary precaution to prevent the possible introduction of contagious diseases from foreign countries. The large expenditures which have been made by this country to exterminate such diseases from its borders have made this precaution of special importance to prevent the possibility of reinfection of the United States. In addition to the quarantine of cattle, a quarantine of fifteen days has been required upon all sheep and swine brought into the United States at these ports. The number of pure-bred sheep imported has been largely increased over that of other years, which makes this precaution of detention under veterinary inspection especially important and desirable.

When the demand for pure-bred animals is in excess of the supply, the tendency of those engaged in the business is to exercise less care to select only healthy animals and guard them against exposure to disease. It becomes purely a business enterprise with a manifest desire to curtail expense without especial regard to the ultimate loss which might result to buyers. The need for careful inspection under Government control is then more apparent. No important cases of disease have developed in either of the quarantine stations, and the vigilance of the officers of this Department has not been relinquished. The uniformly healthy condition of our flocks and herds in America makes it imperative that a strict oversight should be placed over all animals brought from foreign countries to prevent the introduction of such exotic maladies as would devastate an important industry, and lead to great loss.

DIVISION OF STATISTICS.

During the past year there has been an effort to give more prominence than usual to original investigation. The routine demands for results in crop-reporting and other lines are always exacting, and the means at hand for collecting special statistics and for compilation and preparation of special reports are limited. A more general and searching survey of the resources and condition of agriculture is necessary to

a proper understanding of its practical and political needs. Such investigation is progressing, and bulletins illustrating these conditions are in preparation. Some will present the status of rural industry in the older States, and others will show the resources and agricultural development of the States of the prairies and the plains.

Graphic illustration of statistics has met with much favor among industrial educators and students of rural economy. The issues of the past years, in this line, amount to 40,000 copies, the distribution having been mainly to farmers' institutes, agricultural and other colleges, and to libraries.

Special investigation is in progress in various lines in Europe for more exact data relative to production and prices of products with which America competes. It is realized by all thoughtful minds that while home consumption requires nine-tenths of our agricultural production, an active demand for any surplus relieves stagnation in the markets and advances prices. As this demand is limited and variable, its stimulation in certain lines is practicable and desirable. An agent is now in Europe laboring zealously against existing prejudice for the substitution of corn for rye, potatoes, and other food of the laboring masses. Much can be done towards enlarging both the quantity and variety of our exports of the products of agriculture, and the first step in this direction must be a more intimate knowledge by our own people of the condition and character of foreign markets. This information it devolves upon this division to provide. Much that is new in this direction is proposed for the statistical service of this Department. An increase in exports of only 10 per cent means an enlargement of the income of our farmers of over \$60,000,000, and a steadying of prices of all that is consumed at home. A few thousands properly expended for such a purpose might add as many millions to the national agricultural income.

Anticipating a favorable result in the effort to extend the trade for our agricultural products in the South American Republics, and realizing that what our people needed in order to enable them to take advantage of such improved conditions of trade as might, through the efforts of this Government, be established with these countries—an anticipation which has, in regard to some of them, been already realized—there has been prepared from time to time in this division, and published in its regular monthly crop report bulletin, a series of articles upon the resources and agricultural conditions of leading countries of South America. As these reports go largely to the same circle of readers, I have directed that the several reviews of the countries of Central and South America referred to be republished in a bulletin for general distribution. This will no doubt be ready before the close of the year. The employment of special agents to further investigate this subject, the character of agricultural products demanded in these countries, the prices obtainable for them, the quality of goods demanded, and, in a general way, the opportunities that exist in this direction, is

much needed, and I trust it will be in my power to carry out such a plan.

Another feature of foreign agriculture which has commanded attention in the work of this division has been what might be called "the political economy of farming," and careful compilations have been made of the coöperative bank and loan systems of several countries, including Russia, France, Germany, Austria-Hungary, and others, in so far as they apply to the farming community. The results of these investigations have also appeared from time to time in the regular monthly crop reports of the division; but it is my intention that they also shall be reprinted in a single bulletin, in which I hope to be able to superadd some of the valuable suggestions available as the result of the deliberations of the International Congress held at The Hague last September. In these days there is no distance limitation to possible competition, and it is incumbent upon the Statistical Division of this Department to investigate the conditions of agriculture throughout the world, for there is no section of the civilized world which may not at some time and in regard to some product be found to be a competitor of the American farmer, nor in which at some time and for some product the American farmer may not find a possible market.

DIVISION OF CHEMISTRY.

In addition to the routine duties of the division, two main lines of investigation have been followed.

The first line relates to the methods of manufacture of sugar from beets, sugar cane, and sorghum. An experimental station for the production of beets of high saccharine richness has been established in Nebraska, and the results of the first year's work are eminently satisfactory. The beets have yielded over 20 tons of roots per acre, with a sucrose content of about 15 per cent, which is equal to the average content in sugar of the sugar beets of Europe. Scientific methods of culture have been followed, devoted particularly to the purpose of growing mother beets of high saccharine richness for the purpose of producing seed.

In Florida an experimental station has been established for the purpose of investigating the possibilities of the reclaimed muck lands of that State for the growth of sugar cane. The season's work at this station is not yet completed, and therefore no statement of the results can be given.

In Kansas two experimental stations have been conducted, one for the purpose of developing a higher grade of sorghum cane for sugar-making purposes, and the other for the purpose of illustrating the possibilities of the alcohol process for producing sorghum sugar. The work of both of these stations has been attended with great success. Over 150 pounds of sugar per ton of cane have been obtained by the alcohol

process from the first run of the cane through the mill, and it is estimated that at least 50 pounds can be added by the subsequent runs, thereby doubling the product as compared with the old process, and demonstrating that by the use of this process sorghum sugar can be made with the same ease that sugar is made from sugar cane. It is believed that the results of the work of the Chemical Division in this respect will be of such a nature as to encourage capital to investment in sorghum sugar making with the assurance of a profitable return on the money invested, provided the other features relating to geographical limitations, improved varieties, careful culture, and adequate manufacturing facilities, insisted on in my previous reports, be observed.

The second line relates to the continuation of the investigation into the adulteration of food. This work has been confined chiefly, during the past year, to studies of the composition of sugars, molasses, sirups, honeys, and confections; teas, coffees, and chocolates. Samples of these articles of consumption have been purchased in all parts of the United States and submitted to examination for the purpose of detecting the character and extent of the adulteration.

In regard to the sugars no adulteration has been discovered. The cheaper sugars of commerce are boiled in such a way as to incorporate with them a considerable quantity of molasses and water. Some of the low-grade yellow sugars which are sold have been found to contain only about 86 per cent of pure sugar. The presence of water and molasses in the sugar can not be regarded as an adulteration, inasmuch as these are natural constituents of sugar in the raw state. It is simply a question for the buyer to know whether he gets the same amount of saccharine matter by purchasing the low grade of sugar of this kind for a given sum as he would were he to purchase the high grade refined sugar at a higher price.

In regard to molasses and sirups and the liquid honey, however, the large majority of the samples on the market are adulterated with glucose made from maize or potatoes. This adulteration is not generally considered harmful, but so far as used is fraudulent; but another occurring in molasses is certainly deleterious, to wit, the bichloride of tin used in giving a luster to high-grade yellow sugar, which ultimately finds its way into the molasses. In tea the chief adulteration seems to be the admixture of foreign leaves and the refuse of the leaves which have been once exhausted.

The results of the examination of coffee were remarkable and startling. Not only has it been found that a large percentage of the ground coffees of commerce is adulterated with chicory and pea and bean flour and other harmless substances, but it was found that wholly artificial coffee beans have been introduced into the market, many samples of coffee bought on the open market consisting largely of these artificial beans. These beans are made of chicory, pea and bean flour, and caramel, and molded so as to resemble the natural coffee berry. These wholly artificial beans are sold to the trade at 4 cents a pound.

These investigations disclose the fact that in a large measure these fraudulent beans are imported, and I am firmly of the opinion that such importations as well as their manufacture and use in this country should be prohibited by appropriate and stringent legislation.

DIVISION OF ENTOMOLOGY.

Much interest has been occasioned and some alarm felt during the summer by widespread reports of unusual abundance of locusts or grasshoppers, particularly in the Western States. Reports from farmers have come from Michigan, Minnesota, North Dakota, South Dakota, Montana, Wyoming, Idaho, Kansas, Nebraska, Colorado, Texas, New Mexico, and California. In all of these States, except California, a repetition of the locust scourge of 1874 to 1876 was feared. In this emergency active measures were undertaken to arrive at a proper understanding of the true state of affairs. Four special agents qualified for the work were sent into the field, and all of the States mentioned were visited. In all except Minnesota and North Dakota the insects were found to be local species which had from various causes become exceptionally abundant. None of them are greatly to be feared, and all are nonmigratory, except in small degree. The visit of the agent was sufficient in most cases to allay fear for the future. Considerable damage, however, was done in parts of California by the devastating locust, and in North Dakota and Minnesota undoubted specimens of the Rocky Mountain locust (*Caloptenus spretus*) were found, indicating that this notorious insect had migrated in small swarms from its permanent breeding grounds, and justifying some apprehensions as to the prospects for next year.

Anticipating from the records of 1890 an exceptional demand for information on the subject, the Department published early in the spring, under serial number 25, Entomological Division, a bulletin on destructive locusts, summarizing the habits of the principal destructive species and giving at some length an account of the best remedies to be used, particularly against the Rocky Mountain species. The authorities, ably assisted by the farmers, have been carrying on a vigorous warfare on the lines suggested by the bulletin with excellent results, and their crops will, it is hoped, be saved from destruction next year unless the insect has been breeding in numbers across the line in Manitoba and British Columbia. We have the assurance of the Canadian authorities that, so far as they can find, no swarms have been observed in that part of the Dominion. The outlook for the coming season is therefore, on the whole, favorable.

The investigation of the bollworm of cotton mentioned in my last report has been continued through the present season. An agent has been stationed at Shreveport, La., conducting in the main experiments with bacterial and fungous diseases of other caterpillars, with the view

of endeavoring to procure a contagious germ which may be artificially transmitted to the bollworm. His efforts have as yet been rewarded with only partial success, but many facts of scientific value have been brought out. Another agent has been working in Arkansas on different insecticide mixtures for this insect, but the work of the season has been hampered from the fact that the bollworm in that locality has not been numerous.

The entomologist has for some time been endeavoring to introduce some of the European parasites of the Hessian fly. A supply of the Hessian fly infested by the commonest European parasite—*Semiotellus nigripes*—was secured. These were placed in the hands of several agents and correspondents of the Division of Entomology in sections of country infested by the Hessian fly, and directions were given as to the best methods of bringing about the acclimatization of the parasite. One of these experiments has resulted satisfactorily, and the parasite has become established in that vicinity. Practical results of great value are to be anticipated from these experiments. Another experiment in the importation of European parasites has resulted successfully. In 1883 the commonest European parasite of the cabbage worm was brought over in small numbers and established near Washington. A year ago a second lot was imported and placed in the hands of an agent of the division at Ames, Iowa, who reports that this parasite has become very abundant at Ames and has greatly reduced the numbers of the cabbage worms. The same parasite is now reported from a large extent of country.

Early in the summer the hop plant-louse was reported as exceptionally abundant in the hop-growing regions of New York State, and a repetition of the great damage of 1886 was feared. An emergency bulletin was prepared covering the life history of the insect and the best remedies to be used against it, and was distributed about the infested region. Largely, I believe, as a result of this prompt action on the part of the Department, hop-growers were enabled to fight the insect in the most approved manner, and the damage to the crop has been comparatively slight. The bulletin in question was also distributed in Wisconsin and in the hop-growing regions of Oregon and Washington, where the insect first made its appearance two years ago.

The State Board of Horticulture of California, having obtained an appropriation to permit it to make further efforts to secure parasites, by resolution placed the sum at my disposal, with a request to send Mr. Albert Koebele, an agent of the Division of Entomology, who had been so successful in securing the Vedalia ladybird, on another mission to Australia and New Zealand for the purpose of studying and importing into California other insects which might prove of benefit to the horticultural and agricultural interests of that section of our country. This I consented to do, his expenses to be paid by the board and his salary by this Department, with the understanding that he report to the Department. He sailed August 23, 1891.

The gypsy moth, a destructive insect imported from Europe, has invaded the State of Massachusetts, and threatens great injury to many forms of cultivated vegetation, particularly to fruit and shade trees. The Department has been consulted by the State Board of Agriculture, and the entomologist has twice visited the infested region during the season for mutual consideration of the best means for eradicating the pest.

The subject of bee culture has been a particular subject of investigation the present season. A station for experiments has been established in Ingham County, Mich., and a special agent has been appointed and stationed temporarily at Washington to take charge of the work in this direction.

Other investigations of less general importance, having, however, a strong bearing upon the farming interests of restricted localities, have been carried on. The stationary field agents of the division have been industriously at work in their different localities upon injurious insects, with the best of results.

DIVISION OF BOTANY.

The work of the division in the line of exploration and survey of the vegetable productions of the country has been extensive. In conjunction with the Division of Economic Ornithology an exploration of the Death Valley in southeastern California was undertaken, beginning about January 1. The object of this expedition was to obtain a complete knowledge of the animal and vegetable life of that desert region, including several mountain ranges which traverse the valley as well as those which form its boundaries, and to mark as completely as possible the limits of the life zones from the lowest to the highest points of the region. Two botanical collectors were constantly in the field for eight months, or until the field work was closed. The plants collected have been received at the office of the division, and are now being carefully and thoroughly investigated. The results of the work will be embodied in a bulletin, which it is believed will be of unusual interest and of great scientific value.

Botanical work has been continued in western Texas, New Mexico, and Arizona with special reference to the grasses and Cactaceæ of that region, with the purpose of supplying greatly needed information on some of the widely diffused and yet little known plants of this region of country.

Botanical investigations and collections have also been made in the Indian Territory, in Nebraska, in northern Wisconsin, and in Minnesota. The collections from these sources have been very satisfactory, have contributed much to our knowledge of the vegetation of those regions, and have added much to the value of the Herbarium. We have also had a botanist in southern Florida, who has investigated the vegetation

of the keys and coast, and has added much to our knowledge of this region.

The Herbarium work during the year has been much enlarged, many thousand specimens have been added to the permanent collection, many thousands have been distributed to the agricultural colleges, and exchanges have been made with many scientific societies, both domestic and foreign.

Several new botanical bulletins have been published, particularly No. 4, of Contributions from the National Herbarium, giving an account of a very interesting collection of Mexican plants; and No. 1 of the second volume, which is the first part of a Manual of the Flora of Texas, which is being prepared as a convenient reference book for botanists and residents of Texas and the adjoining region, a work which is much needed and is highly appreciated. The second part of the illustrated work, called "Grasses of the Southwest," is now in press, and when bound with the first part will make a valuable volume of illustrations of North American grasses.

The experimental grass and forage station which this division has in charge at Garden City, western Kansas, has now been in operation for three years. It was established for the purpose of testing grasses, forage plants, and grains which are best adapted to cultivation in the arid and semiarid districts, and of ascertaining what are the possibilities of agriculture under the conditions there existing. The experiments have been conducted on a large scale and with great care, and the results obtained this year are highly satisfactory, showing that certain varieties of grains, grasses, and forage plants have withstood the aridity of the climate and have produced crops which compare well with those of more eastern and moister regions. These experiments will be continued for a fuller confirmation. It seems to be proven that to secure a good stand of grasses for pasturage a longer time is required than in a moist climate, but that with proper varieties and proper management a good result may be obtained.

So general has been the desire to ascertain the possibilities of grass and forage growth without irrigation, that arrangements have been made with many of the experiment stations in other portions of the arid territory to conduct jointly with this Department a series of experiments in this line. New Mexico, Arizona, Utah, Wyoming, North and South Dakota, and Colorado are the points where these experiments have been instituted.

DIVISION OF ORNITHOLOGY AND MAMMALOLOGY.

During the past year the work of this division has been continued in the directions indicated in my last report, namely, (1) the collection and diffusion of information relating directly to the economic value of mammals and birds; and (2), researches relating to the geographic distribution of species, with special reference to the ascertainment of

the boundaries of the several life zones in the Western States and Territories. A report has been published comprising the results of a biological reconnoissance of Idaho, made in 1890.

The most important work of the year has been a biological survey of parts of southern California and Nevada, known as the Death Valley expedition, which was in charge of Dr. C. Hart Merriam and Mr. Theodore S. Palmer, the latter being in charge during Dr. Merriam's absence. This expedition was organized for the primary purpose of determining the boundaries of the natural life zones in southern Nevada and southern California, and studying the problems relating to the laws which govern the distribution of life. The northern boundary of the Lower Sonoran Zone was traced by Dr. Merriam in person completely across the southern part of the Great Basin from Owen Valley at the foot of the Sierra Nevada in California to the Santa Clara Valley at the foot of the Great Colorado Plateau in Utah. The determination of this line, never before attempted, is a matter of considerable satisfaction to the Department, inasmuch as it fixes the northern limit of successful raisin production and of profitable cultivation of several subtropical fruits.

The area surveyed includes the High Sierra as well as the arid deserts contiguous thereto, and consequently embraces parts of all the life zones known on the continent of North America from the Arctic-Alpine to the Lower Sonoran. The area surveyed comprises about 100,000 square miles situated between the parallels of $34^{\circ} 30'$ and 38° north latitude in southern California and Nevada and a small area in northwestern Arizona and southwestern Utah, thus including all of the torrid desert valleys and basin ranges between the Sierra Nevada and the Colorado Plateau.

Through the coöperation of the Weather Bureau (transferred to the Department of Agriculture July 1) a meteorological station was established in Death Valley in April, where continuous observations have been taken until the present time. A regular station is permanently located at Keeler, on Owen Lake, and another was established near timber line on the High Sierra, so that simultaneous observations have been taken at three distinct points in the area under investigation, thus bringing together a series of thermometric and barometric data which have never before been available in work of this character.

The members of the expedition are scientific experts comprising the best field naturalists in the country in their several special lines of work. By coöperation with the Botanical Division a competent botanist, Mr. F. V. Coville, and a botanical assistant accompanied the expedition and made large collections of the grasses and other plants of the region. By coöperation with the Entomological Division an experienced insect collector, Mr. Albert Koebele, joined the expedition in the Death Valley region early in April and remained a little more than a month.

Incidentally, large collections were made in various departments of natural history, and it is expected that the report of the work of the

expedition will be of more than ordinary scientific as well as practical interest.

In addition to the Death Valley expedition, field work has been conducted in parts of Texas, northern Idaho, and the State of Washington.

SECTION OF ECONOMIC RELATIONS.

The economic work of the division has been carried out mainly along the lines indicated last year. The illustrated bulletin on hawks and owls, described at length in my last report, still remains unpublished through lack of funds to pay for reproducing the colored plates. Meanwhile the text has been revised thoroughly, and considerable new matter has been added. It is believed that most of the material necessary for the completion of the bulletin on crows is at hand, special effort having been made the past spring and summer to procure the stomachs of old and young crows in corn-planting time and during the breeding season of the smaller birds. Only part of the material thus collected has been studied, but the examination of the rest will be completed at once, and the bulletin will be issued as soon thereafter as possible.

Some progress has been made on the other bulletins mentioned in last year's report, particularly on that relating to the crow blackbird. Several hundred stomachs of this species have been added to the collection, and the preliminary examination of most of them has been made.

The reference collection of seeds has been greatly enlarged and its utility correspondingly increased; and a series of slides for the microscope has been prepared showing fragments of the skins and other tissues of carefully identified seeds and fruits, and also fragments of worms, crustaceans, insects, and other invertebrates which are likely to be found in the stomachs of birds.

The routine work of the division is steadily increasing. The number of specimens received for identification is much larger than in previous years, the total number for 1891, including those collected by field parties of the division, exceeding 10,000.

DIVISION OF FORESTRY.

This division was principally designed to give information upon and to arouse and stimulate interest in forestry matters, hence its labors hitherto have, more than those of other divisions, been of a missionary character.

The wisdom of its institution and the timeliness of its warnings can no longer be doubted, showing as it has the inevitable consequences of an irrational treatment of our forest resources. It has become apparent that there is no such thing as "inexhaustible supplies" when increasing demands of an increasing nation are to be satisfied; it has become also apparent that thousands of acres of good agricultural soil

have annually become barren and waste, and are being washed away, merely through lack of attention to the forest cover and the unwise and improvident removal of the same. Persons in high authority and whose judgments command respect allege that the cause of excessive water conditions in some of our rivers is the denudation of their banks, and recommend as a principal remedy their reforestation. It is claimed that much of the loss by flood which we experience annually could be avoided by a proper attention to our forest cover.

The existence of a Government agency to promulgate sound forestry principles, while the Government itself has made no provisions to apply such principles to its own permanent timber lands, is an incongruity that suggests the desirability of further legislation. The power conferred upon the President by the law of March 3, 1891, to establish forest reservations must needs remain largely inoperative as far as maintenance of proper forest conditions is concerned, unless it be followed by the establishment of a proper administration based upon forestry principles. The establishment of permanent reservations of forest lands needful for maintenance of proper water conditions placed under a rational management seems to be a proper forest policy for our immediate future.

Since it has been understood that not only questions of arboriculture and woodcraft, but all those relating to the utilization of the products of our forest, belong within the sphere of this division, since in fact the great lumber and wood-working industry of the country, ranking at least second in value of product, finds in the Forestry Division its first official representation, the demand upon it for information of the most varied kind has increased and makes an increase of its force and an extension of its investigations imperatively necessary, if it is successfully to satisfy the great interests which it is to subserve. A slight increase in the appropriation has enabled the division to enter upon a somewhat more extended line of original research.

The most noteworthy and far-reaching work of this kind inaugurated is the examination and testing of our more important timbers upon the most comprehensive and exhaustive plan ever undertaken in any country except Prussia, where simultaneously a similar line of investigations has been inaugurated. This work has elicited the highest commendation from engineers, bridge-builders, and others interested in large wooden structures.

The object of this work is not only to obtain a better knowledge of the properties and technical adaptation of our woods, but to furnish an estimate of the interrelation between quality and physical appearance and structure, and also between quality and conditions of growth. At the same time opportunity is afforded by the examination of an unusually large amount of material of known origin to establish the laws and rate of growth of the different species, a knowledge upon the basis of which alone forestry can be carried on profitably.

One of the special investigations flowing from this work now in progress is as to the effect of turpentine orcharding upon the quality of the pine, the results of which it is expected will clear away the prejudices existing against such timber and place a proper value upon thousands of square miles of so-called turpentine timber.

DIVISION OF VEGETABLE PATHOLOGY.

During the past year, as heretofore, the Division of Vegetable Pathology has devoted special attention to field work, having in view the prevention of plant diseases. At the urgent request of a large number of western New York nurserymen and fruit-growers, an assistant of the division was sent to Geneva early in the season, with instructions to remain on the ground and conduct such investigations as would throw light on the cause of a number of destructive plant maladies and the best means of combating them. Through the courtesy of the experiment station authorities at Geneva the assistant was given a room in the station building, where every facility was afforded for doing good work. The investigations for the most part have been confined to nursery stock in the vicinity of Geneva, although considerable attention has been given to diseases of fruit in other parts of the State. As an indication of the interest and confidence in the work of the division it may be stated that nearly three million trees of cherry, apple, quince, pear, and other fruits in the nursery have been treated for leaf blight and other diseases the past season in the vicinity of Geneva. Taking the country at large, no less than ten million nursery trees were treated the past season in accordance with directions issued by the division. In addition to the work on nursery stock, extensive experiments have been made in treating diseases of orchard fruits, such as apple and pear scab, pear-leaf blight, peach rot, cherry-leaf blight, etc. Through the investigations of the division several of these diseases can now be successfully controlled at comparatively little expense.

In the treatment of grape diseases, several new lines of work have been undertaken; the principal one was an attempt to cheapen the treatments without affecting their efficacy. It was shown, among other things, that the copper in the Bordeaux mixture could be reduced 90 per cent without apparently affecting its efficacy as a preventive of black rot and mildew of the grape. If the results of this experiment are substantiated by others made on a large scale and under varied conditions of climate, the cost of treating grapes for mildew and rot can be reduced from \$14 to a little over \$2 an acre. It is gratifying to announce that the efforts of the division to introduce cheaper machinery for the treatment of plant diseases is meeting with signal success. Suggestions have been made whereby suitable spraying machines have been manufactured in this country at far less cost than heretofore at home or abroad. Another drawback to a more general adoption of the treat-

ments suggested by the division has been the difficulty met with in getting the various preparations used put on the market in concentrated form. Suggestions have been made, which have been in a measure complied with, to firms to put upon the market the necessary ingredients for preparing, in small quantities, the various solutions, mixtures, etc., set forth in the publications of the Department.

The laboratory work during the year has been pushed forward with vigor. Investigations of this nature are always preliminary to practical work in the field. For the most part the work the past year has been confined to a further study of grape diseases, pear blight, peach yellows, the California vine disease, rot of sweet potato, and a bacterial disease of oats. The new lines taken up, and which as yet have not yielded sufficient results to warrant an attempt at practical experiments in the field, are investigations bearing on blight, foot rot, scab, and other diseases of the orange, rust of cereals, diseases of violets, carnations, and other greenhouse plants and several bacterial and fungous diseases of injurious insects.

Since my last report the work on the California vine disease has been continued. From the 1st of November, 1890, to the early part of May, 1891, the special agent in charge of this work was engaged in the preparation of a report on the subject. Since the completion of this report the agent has been engaged in laboratory and field investigations in various parts of California. The hope is strong that the virulence of the disease is abating, and the outlook in southern California is much more encouraging than at any time since the dread malady appeared.

At frequent intervals during the past three years urgent calls have come from Florida and elsewhere for information in regard to the diseases of citrus fruits. Practically nothing in the way of investigating the many serious maladies of this important group of plants has been undertaken in this country. In the early part of the year a special agent was sent to Florida with instructions to remain a month and collect such general information on the diseases of the orange and similar fruits as the limited time would permit. Later in the season a new disease, locally characterized as blight, wilt, or "go back," made its appearance to an alarming extent in several parts of Florida. Two special agents were detailed to visit the infested regions and gather as much information as possible on this and other diseases. Owing to the lack of funds the agents spent only a short time in the field, but it is believed that the information obtained will be of value when the time arrives for a thorough investigation of this subject, which will be when the means are forthcoming. The new disease has already caused thousands of dollars' damage in some of the finest groves in Florida, and there is no question that unless steps are taken to check it serious results will follow.

In the peach yellows investigation special attention has been given to a continuation of the work on fertilizer experiments and the com-

municability of the disease. As a result of three years' careful work, involving over 40 acres of orchard and the use of almost every conceivable kind of fertilizer, it may be said that in not a single instance has a case of yellows been prevented or cured by the use of fertilizers. This experiment was made to determine whether the cause of the disease was the lack of nutrition and immature growth. The question as to the communicability of the disease is no longer a matter of doubt, it having been proved conclusively that the malady may be communicated by budding. A disease called peach rosette, which closely resembles yellows, but which is even more virulent, has been studied in Georgia and elsewhere. Evidence seems to establish also the communicability of this disease.

In addition to the foregoing, exhaustive laboratory investigations on the disease in question have been under way. This, together with the other work, while not actually furnishing evidence as to the cause of yellows, is gradually narrowing the lines of research, making future investigations far more tangible.

OFFICE OF EXPERIMENT STATIONS.

The principal work of the Office of Experiment Stations under law is the preparation of publications relating to the work of the agricultural experiment stations. Nineteen documents, aggregating 1,335 pages, have been issued during the past year, chief among which is the second volume of the Experiment Station Record, consisting of 12 numbers, with a classified table of contents and a detailed index. This volume of the Record contains abstracts of 329 bulletins and 42 annual reports of the stations and 36 publications of this Department, aggregating 14,781 pages. It contains abstracts of sufficient length to show the object and plan of the investigations reported, the main facts necessary to an understanding of the way in which researches were carried on, and the results reached. It also contains suggestions of lines and methods of inquiry for our stations, and statistics and other information regarding experiment stations in this and other countries.

To meet the urgent demand, referred to in my last report, for information regarding the results of agricultural inquiry in Europe, the office has added to the Record reports of European investigations. It has been necessary, however, to confine the work to subjects of wide interest or immediate importance to our station workers.

The literature relating to investigations in agricultural science is so extensive that a general card index, prepared in the best manner and kept up to date, has become a necessity for investigators and students. The Department has been forced, therefore, to enter upon the preparation of such an index for itself and the experiment stations, and the first installment of cards has been issued to the stations and agricultural colleges. It is believed that such an instrument will be of very great

service, not only in giving information as to what has been done and thus preventing our stations from going over ground already covered, but also in suggesting new lines and methods of inquiry, and in raising the general level of our experiment station work.

Representatives of the office have visited twenty-three stations with a view to observing the progress and needs of their work and for personal conference regarding the interests of their common work.

The work of this division of the Department had so increased both in amount and scope that it became absolutely essential that the director should devote his entire time and energy to official duties. Prof. W. O. Atwater, realizing this necessity and not being able to comply with it, has resigned the directorship of the office. His services will, however, be retained, and the fruit of his wide experience and study with regard to European investigations in agricultural science will be made available by contributions to the Record in certain special lines.

Under the new organization of the office Mr. A. W. Harris, formerly assistant director, becomes director, and Mr. A. C. True, formerly first assistant editor, becomes assistant director. The editorial and clerical force of the office has been somewhat enlarged.

Agricultural experiment stations are now in operation in all the States and Territories except Montana and Idaho. During the year new stations have been established in Wyoming, Oklahoma, and Washington. Of the fifty-five stations in the United States, fifty in forty-three States and Territories receive their support wholly or in part from the United States Treasury. The stations employ 450 persons in the work of administration and inquiry. The mailing lists of the stations include about 350,000 names. The results and processes of their experiments are described not only in the station bulletins and reports, but also in thousands of newspapers and other periodicals. During the past year there have been many evidences of public approval of the stations and their work, as indicated by acts of State legislatures in their behalf and money grants by local communities, agricultural associations, and private individuals.

Among the investigations of wide interest which have engaged the attention of the stations during the past year may be mentioned those relating to the feeding of milch cows, pigs, and beef cattle; experiments in the culture and improvement and varieties of corn, wheat, oats, sugar cane, potatoes, and tomatoes; investigations of the nature of the various kinds of smut in cereals, and the testing of means proposed for their prevention; the devising of simple and practical methods for the testing of milk at creameries and at private dairies. In one State a thorough and systematic study of the soils by field surveys and laboratory tests is being vigorously prosecuted. In twenty-five States stations are performing, either wholly or in part, the chemical and other work connected with the inspection of fertilizers. In coöperation with this Department a number of stations are conducting experiments with ref-

erence to the introduction of the sugar-beet industry. The horticulturalists of the stations have extended the lines of their work, and in addition to the testing of varieties have carried on important investigations in the improvement of fruits and vegetables by cross fertilization and selection.

In general, it may be said that the past year has brought many evidences that the individual stations are finding the lines in which they can best work, and are entering upon systematic courses of experimenting, which should ultimately bring results of great and lasting value to the agriculture of the country.

DIVISION OF POMOLOGY.

The fruit crop has been unusually large. All the orchard fruits have borne abundantly in almost every section; the plum crop is reported as being the largest ever known; and small fruits and grapes have been very prolific. The work of the division has been essentially along the lines indicated in my former report. The text and the plates of the wild grape monograph are completed and ready for the printer; but the expense of publishing the plates is so great that I am not yet justified in ordering their publication from the regular printing fund. The monograph is really of such value that it is hoped that the means may be provided for this publication.

A bulletin on the nuts of America, with illustrations, is now in press. Some new fruits have been imported and are being tested; among them, persimmons from Japan, reputed to be hardy enough for the Northern States; and some date palms from Arabia for the semitropical regions. Some new native fruits have been distributed, and more could be done in this line if the means were afforded.

One of the problems in pomological circles is how to secure a class of apples for the northwestern States that can endure their northern climate. It is claimed that, while much good has been accomplished by cultivating the Russian apples, it is found that they do not prove as successful as was hoped. Fruit-growers, therefore, have anticipated a possibility of securing a stock sufficiently hardy for the northern climate, and of good quality, from the propagation of wild fruit and native seedlings and by experimenting therewith, selecting and sifting continually the best, until really valuable ones may be obtained. It is claimed that the most valuable apples that they have to-day in the Northwest are not Russians, but have been developed on their own soil in the way above indicated. For this reason the Pomological Division is giving such consideration to this subject as its limited means will allow.

The work of the division continues in completing the record of the distribution of the various fruits and their varieties, so that ultimately an exhaustive monograph on that subject may be published. The bulletin on small fruits is well under way.

DIVISION OF MICROSCOPY.

During the current year this division has been engaged principally on microscopical investigations in relation to food adulteration, including the examination of various lard compounds, butterines, condiments, and commercial oils, and in microscopical examinations of samples of milk, cream, butter, and water received from various parts of the country.

The division has, in addition, continued the collection, classification, description, and illustration of edible and poisonous mushrooms of the United States, and has made examinations of the structure, and experiments as to the tensile strength, of numerous textile fibers. It has also made investigation and comparison of the different classes, grades, and qualities of wool, and the microscopist has been frequently called upon to testify in the United States courts, in cases when these grades and qualities have a bearing upon the duty imposed.

The Department has just received from the State Department samples of wool from Chian, Palestine, and Asia Minor, an important addition to its collection, which will be used in future comparative examinations.

The Department has an increasing demand from all parts of the United States for additional information and for copies of the illustrations and recent reports made by this division upon edible and poisonous mushrooms. The publication of these reports has stimulated a more lively appreciation of the value of an esculent which is used on so large a scale in European countries and which offers to the farmer an important and remunerative field of culture.

ARTESIAN WELLS, UNDERFLOW, AND IRRIGATION.

The Fifty-first Congress appropriated in all \$70,000 for investigations into artesian and underflow waters, the sources thereof, and their availability for irrigation within the region known as the Great Plains, and for an "inquiry into the best methods of cultivating the soil by irrigation." These appropriations were made under three different provisions, the first by act of April 4, 1890, appropriating \$20,000, the second by act of September 30, 1890, appropriating \$40,000, and the third by act of March 3, 1891, appropriating \$10,000. The first act required a report immediately after July 1, 1890, which report was duly made. The second required that the report be fully completed before July 1, 1891. The time for the completion of the final report under the first two appropriations was extended by act of March 3, 1891, to January 1, 1892.

The staff of the artesian and underflow investigation was again in the field very soon after the approval of the act of September 30, 1890. The engineers and geologists worked faithfully throughout the autumn and winter months in the southwestern and western portions of the territory under investigation. The chief engineer completed a progress report,

accompanied by maps and profiles of the territory embraced by and lying between the valleys of the Arkansas and North Platte rivers. These profiles illustrate the depth and location of the drainage or underground waters found within this section of the Great Plains. They show also the possibility of utilizing a large water supply now lost in the sand and gravel stratum of the two river valleys named. The reports already printed strongly confirm the claim now made that the loss by seepage within the porous strata of these river valleys is large enough, if it were restored to their channels, to make streams doubling in volume the present rivers. The geologist sent a brief progress report showing the existence of what are termed rivers of the mid-plains, *i. e.*, streams fed and maintained by the regional precipitation or rainfall, which streams if they could be diverted at their sources or recovered from the area in which they now sink, and be thereafter stored and diverted to the plains for the purposes of irrigation, would make certain the reclamation of a very large proportion of the region. The partial reports prepared by the chief engineer and the chief geologist were printed early in the present year with a progress report on irrigation which the special agent in charge had prepared under my direction in the Office of Irrigation Inquiry.

The field work was continued in the southwest during a large portion of the winter, and in portions of Colorado and Nebraska, till long after the first snows had fallen. As early as possible in the spring the staff of the artesian and underflow investigations was transferred to the northern portion of the region, embracing the two Dakotas, western and northern Nebraska, and a portion of eastern Wyoming and Montana. The southwestern assistant geologist continued at work during the winter and spring and until early summer, when he submitted his report embracing the several artesian basins in western and southwestern Texas. The whole inquiry throws a flood of light on the existence and extent of the two largest artesian basins known to the world, one being that of the Dakotas or James River Valley, and the other that of central Texas from Fort Worth to the south and west. Since the beginning of the field work in the investigation ordered by Congress, and as a result of the limited publication of the reports thereof, great encouragement has been given to the farming population west of the ninety-seventh meridian of longitude. The activity displayed in the search of artesian waters has resulted in the successful drilling of several hundred additional wells during the past year. No diminution of flow has yet been reported. It has added also to the hopefulness of the people, encouraging them in more or less successful efforts to utilize underground and other water supplies. At the earliest practicable moment the field staff was reduced in numbers, and the field work entirely suspended October 1, since which time the chief engineer and geologist have devoted themselves to the preparation of their reports.

The inquiry thus conducted necessarily embraced an examination of

several northern sections in which artesian waters were not expected to be found. These investigations include the Red River basin in the northern and eastern part of North Dakota, the Turtle Mountain and Devil Lake drainage basin, portions of the Upper Missouri and Milk River valleys, and engineer reconnoissance into the practicability of utilizing for the purpose of an irrigation supply certain lakes lying near the British-American frontier, and the report thereon will be sent to Congress with appropriate maps, plans, and illustrations.

The progress report prepared by the special agent in charge since the date of my last annual report makes a volume of over 300 pages. Besides the special agent's report proper, it contains a report on irrigation in the States of Montana and Idaho, with portions of Washington and Oregon, prepared by a special agent sent from this Department. It also contains papers on irrigation in Colorado and Nevada; others on the "Imbibition of rocks;" the "Culture of the raisin grape by irrigation;" "Irrigation in Australia," prepared by the special agent in charge; formulas for the measurement of water, and other matters useful to those interested in irrigation. A constant demand for the report of the Artesian wells investigation and for that of the Irrigation inquiry has been made on this Department. As Congress made no provision for their publication in any number, I have been unable to meet these requests. I have the assurance that the final report required by act of March 3, 1891, will be completed by January 1, 1892.

In completing the work of the artesian and underflow investigation, as assigned to this Department by Congress, the utmost effort has been made to make it as exhaustive as was consistent with the comprehensive duty imposed upon me. The work has been so well done, as I hope, that, from the standpoint of objective or surface inquiry, but very little of economic value can be added. Other work would necessarily be of an experimental character, embracing to some extent constructive processes not authorized by the present inquiry, and which I do not recommend to be undertaken by the National Government.

FIBER INVESTIGATIONS.

Fiber investigation during the past year has been confined chiefly to the flax interest in the Northwestern States, Minnesota being the center of cultivation, and to sisal-hemp culture in Florida.

Early in the year the Department imported from Europe three varieties of flaxseed for experimental culture, as follows: Pure Riga, White Blossom Dutch, and Belgian (Riga seed grown one year in Belgian soil). These were distributed to a very carefully selected list of names made up of flax farmers, directors of agricultural experiment stations in possible flax-growing States, and flax manufacturers. It is too early to give the results, but the samples of straw already submitted indicate that a good quality of Russian and Belgian flax may be grown and may come to perfect maturity over a large extent of our country.

Capital has been attracted to the industry, and several new manufacturing enterprises have been established. Altogether the outlook for the industry is most encouraging. Its greatest need, however, is the establishment of scutching mills by factors or buyers who will purchase the crop from the farmer when matured, harvesting it, and retting and scutching it under one supervision, in each community, and selling the fiber directly to the linen mills. Such a division of labor is essential to the success of the industry.

The flax products (raw fiber and manufactured) imported into the United States in a single year amount to at least \$15,000,000, the larger proportion of which can be produced at home with the reestablishment of the flax industry.

Sisal hemp is now growing in many portions of southern Florida, where its cultivation long ago passed the experimental stage. A fiber survey of the Florida Peninsula made last spring by the agent of this Department found the sisal-hemp plant growing most luxuriantly in a state of nature from Jupiter Inlet on the east coast down to Cape Florida, on many of the keys, and along the west coast as far north as Charlotte Harbor. On the keys plants were found with leaves from 5 to 6 feet in length and weighing $1\frac{1}{2}$ to 2 pounds, and the fiber is of superb quality. The imports of sisal hemp from Yucatan into the United States in a single year amount to \$5,000,000.

The interest in ramie still continues, but little can be accomplished, however, until the decorticator question is settled. The Department hopes to conduct at New Orleans during the coming year a trial of American machines for extracting the fiber, for which purpose a large quantity of ramie will be especially grown. There are already eight machines which would come into such a competition, besides several processes for extracting the fiber.

DIVISION OF GARDENS AND GROUNDS.

The distribution of plants from the division of gardens and grounds during the past year aggregated over 117,000 specimens, consisting of various hardy and semitropical species, special regard having been paid to their adaptation to various localities. On this special point there are many erroneous opinions entertained by applicants, both in regard to the climatic conditions indispensable for the healthy growth of plants, and to the value of the products from a commercial standpoint. It is almost a daily occurrence to receive requests from the warmest portions of the Southern States for strictly tropical vegetation, although the area where these plants can have even a semblance of success is very limited and of doubtful permanency at the best.

Correspondents in making requests for plants of such tropical species as coffee, nutmeg, cinnamon, cloves, tamarind, etc., will indicate their faith as to climate by stating that they have no frosts, although the

thermometer will at times drop down to 32° F., thus intimating the conviction that a tropical climate is shown merely by absence of freezing, whereas a tropical climate is one where the thermometer rarely shows lower than 70° F. Again, even with a suitable and favorable climate many of the staple products could not be raised as a profitable enterprise. Cinchona, for instance, is now grown to such an extent in the East Indies that the price of the article is so low that West India plantations are being abandoned on that account. The coffee plant and the tea plant, the latter especially, can be grown over a large territory in the United States, but only as a domestic product. Coffee has but a limited area in southern Florida, but the cost of picking and preparation for market would, as in the case of tea, leave no margin of profit when placed in the market to compete with the products of other countries.

While, therefore, the Department makes limited distributions of many semitropical plants, care is taken to advise against extended planting, or extended investments, until tests have proved the practicability of success.

The catalogue of economic plants in the collection of the Department, which I directed to be prepared for publication, was duly issued. There has also been issued from this division a bulletin entitled *Papers on Horticultural and Kindred Subjects*, which, although issued only a few months since, has been so widely called for as to make the propriety of publishing a second edition a subject for present consideration.

DIVISION OF RECORDS AND EDITING.

The wisdom of establishing the Division of Records and Editing becomes more and more apparent as the number of publications which are issued from the Department increases, and these are extended so as to cover a wider variety of subjects. The division is not only able to accomplish such editorial work as is necessary with reference to the bulletins prepared in the various divisions, and to exercise a general supervision over the publishing interests of the Department, but also to promote in a marked degree the advantageous and economical use of the printing fund.

For the first time I am able to express satisfaction with the extent of the appropriation made for the printing of this Department, which will render unnecessary the frequent delay in the publication of important bulletins entailed in previous years by the exhaustion of the fund, and the necessity of procuring a deficiency appropriation in order to enable them to be published at all. The Department is obliged to depend eminently upon its printed matter in order to reach the farmers in the country, and the character of our work, closely relating as it does to the several seasons of the year and their varying conditions, has always made delay in the publication of important documents a matter of grave

inconvenience, and it is not infrequently of serious loss to the farmers of the country. This year, I am happy to say, such need not occur.

The preparation of advanced notices of forthcoming bulletins for the use of the press, which was inaugurated soon after the organization of the division, has been continued in response to a very general expression of appreciation of this feature of the work, and because it is found to insure the advantageous results of prompt distribution of our publications.

DOCUMENT AND FOLDING ROOM.

The work of the Document and Folding Room, though not materially changing from year to year except as it increases with the enlargement of the number of publications of the Department, has been greatly facilitated by the transfer of the division to rooms much better adapted to its work than those it formerly occupied. Applicants whose names are upon our mailing lists to receive particular publications are now able to be supplied with these immediately after their receipt from the Public Printer. Prompt and suitable distribution of printed information, furthermore, has been promoted in a marked degree by the notices issued to the agricultural press by the Division of Records and Editing in advance of the actual appearance of publications.

SEED DIVISION.

The amount appropriated by Congress for this division has been expended to the best advantage in accordance with the intentions of Congress in relation thereto.

RAINFALL EXPERIMENTS.

At the first session of the Fifty-first Congress the sum of \$2,000 was added to the appropriation for the Division of Forestry of this Department for the purpose of conducting experiments to ascertain the feasibility of producing rain by means of explosions. At the second session of the same Congress a further appropriation of \$7,000 was made in the same form and for the same object. The Division of Forestry having no special facilities for the conduct upon a sufficiently extensive scale of such experiments, I concluded to place them in charge of a special agent selected from outside the Department service. Due preparation having been made, the experiments were conducted on an extensive scale during the past season in Texas. I have every reason to believe that, so far as the production of explosions is concerned, these experiments were eminently successful. As regards the object thereof, namely, the production of rain, I have no data yet at hand which would justify me in expressing any conclusions on the subject.

WEATHER BUREAU.

Immediately upon your appointment, July 1, of Prof. Mark W. Harrington, of Michigan, as Chief of the Weather Bureau under the Department of Agriculture, a consultation was held with that gentleman with a view to the efficient reorganization of the Bureau, to carry out the expressed intention of Congress to especially develop its work in the interest of agriculture. The working force of the Bureau, including the civilians and three commissioned officers of the Army, was transferred to the Department of Agriculture on that day, and all the regular employés of the Bureau under the Signal Service were retained. The office force at headquarters was reorganized into three principal divisions, namely, the Executive Division, Records Division, and Weather Crop Bulletin and State Weather Service Division, other branches of the work being conducted substantially under the same organization as existed prior to the transfer. The observing force outside of Washington was reorganized by the appointment of local forecast officials provided for in the appropriation bill, the appointee in every case being selected from the most experienced and competent observers of the service.

The extent of territory assigned to them has been in many cases extended to cover a whole State, or the part of a State nearest the station, and the restriction of forecasts to twenty-four hours was removed to the extent of allowing them, especially in harvest season, to predict the weather for more than one day in advance, whenever the meteorological conditions were so pronounced as to make forecasts for a longer period reasonably certain of verification. They were also instructed to study and endeavor to meet the various wants with reference to meteorological information of the several classes of the communities in which they are located, and to seek and employ every means of speedily reaching farmers with their forecasts. Means were adopted to secure much needed improvement in the weather maps issued at the principal stations, an improvement which is already quite marked. The issue of maps has been authorized at Albany and Oswego, N. Y.; at Charlotte, N. C.; at Charleston, S. C.; at Marquette, Mich.; and at Parkersburg, W. Va.; stations not heretofore issuing them, and the edition of maps at all stations has been very largely increased.

Since July 1 a number of stations at military posts have been discontinued, and many new ones established at the nearest city or town. There are still a few stations at military posts, the transfer of which to more central locations is being considered and arranged. The station at Fort Grant, Ariz., has been transferred to the agricultural college at Tucson, and still another transfer to an agricultural station is under consideration. Arrangements have been made by which the reports from special cotton-region stations, heretofore sent only to Weather Bureau centers, are transmitted also to the several State weather serv-

ice headquarters for incorporation in the monthly publications, weather crop bulletins, etc., issued by them. At the urgent request of those interested in cotton, arrangements have been made to include in these reports telegraphic information of the first killing frost at every cotton-region station. It is also designed to establish ten stations of observation in the sugar region, from which reports of temperature, rainfall, and frost will be telegraphed to a designated center daily, for publication and dissemination throughout the sugar belt.

An exhibit was made at the New York and New England Fair held at Albany in August, showing the working of a Weather Bureau station, including the instruments used, the issue of the weather maps, etc. The results of this exhibit were most gratifying, and will justify other exhibits of the same character on similar occasions, so as to give the people attending these fairs more intimate acquaintance with the working and objects of the Bureau. New weather services have been organized in Arizona, California, Florida, New Mexico, North Dakota, Oklahoma, Utah, Virginia, Washington, West Virginia, and Wyoming, making the number of State services in operation September 30 thirty-nine, and a complete local service will be organized at an early date in Georgia to meet the demands of the cotton-growers in that State. More than one hundred new voluntary meteorological stations have been established and equipped with instruments at the expense of the Bureau since July 1, and nearly as many more where the instruments were furnished at private expense.

The most practical work of the State services is the issue of the weekly weather crop bulletins, sources of reliable information for all interested in agriculture, following up the season weekly, so that an excellent estimate can be made at any time relative to the crops of any county, State, or the country at large. This branch of the service has been highly complimented. On June 30, 1891, there were 630 weather-signal display stations in operation to which the forecasts were telegraphed; 90 stations to which cold-wave warnings were telegraphed; 61 frost warning, and 6 rain warning, the latter in California. September 30 the number of weather-signal display stations in operation was 1,200, an increase of nearly 100 per cent in three months. As an instance of the value of frost warnings, I will quote a single instance by which, as the result of a warning of a killing frost in Wisconsin on August 24, over one-third of the cranberry crop, representing \$125,000, was saved through flooding. Frost warnings in Minnesota and the Dakotas in August enabled farmers to prevent much damage to their crops by the use of smudges, causing a dense smoke. In Kentucky nearly 150 frost-warning stations have been established and are now in operation for the protection of the tobacco interest.

The number of voluntary observers throughout the country has been greatly increased since the transfer of the Bureau to this Department, the percentage of increase in July and August being greater than at any

time during the year ending June 30, 1891. There are now about 2,200 voluntary observers in the United States, being an increase of about 400 for the past three months, and steps are now being taken to cover every section of each State or Territory with voluntary stations of observation, so as to leave no section without stations from 20 to 30 miles apart. To accomplish this it will be necessary that public-spirited towns or individuals purchase the instruments and shelter at a cost of about \$20 for each set. There are but 150 sets of self-registering thermometers on hand for issue, and already nearly double that number of places have been located from which observations will be desirable.

Thus far the present year 258 thermometers and 93 rain gauges have been issued to voluntary observers, as against 157 thermometers and 52 rain gauges during the corresponding period of last year. The completion of an index of meteorological observations in the United States last year will be followed by the completion, at the earliest practicable date, of a similar working index for each of the grand political divisions of the world outside of the United States. The other divisions of the work, such as the service on the seaboard and Great Lakes, the river and flood service, etc., which were already in force, have been continued and enlarged, but I confine myself in this report to special mention of those features which relate especially to the development of lines of work designed especially for the benefit of agriculture.

At the recent conference of representatives of the weather bureaus of different countries in Munich, at which, as already stated, we were represented by the Chief of the Bureau and Prof. Abbe, a permanent international meteorological committee was appointed to superintend the execution of resolutions adopted by the congress and to provide for the convening of a similar congress at a future date. The fact that the Chief of the Weather Bureau was made not only vice-president of the conference, but also a member of this permanent committee, will indicate the appreciation in which our service is held by foreign meteorologists.

I have already referred to the initiation of measures for the future extension and development of the Weather Bureau in coöperation with the agricultural colleges and stations.

In concluding the review of the work done under the several divisions of this Department since the date of my last annual report, it gives me pleasure to state, and I say this advisedly, that each one of more than a dozen divisions whose work I have reviewed has returned in actual value to the country during the past year far more than the entire annual appropriation accorded to this Department.

When I assumed control of this Department I found most of these divisions already in existence and engaged largely on their present lines of work. Having satisfied myself as to the character and value of this work, I was content to let them continue as originally organized, encouraging them in every way in my power toward the achievement of

practical results, and on the line of cordial coöperation in all useful work. My personal attention was especially devoted to a general enlargement of the scope of work of the Department in the interest of practical agriculture, and especially to three principal objects: First, the extension of the market for the disposal of the surplus of our great staple crops, including the cereals, and especially our vast animal products; second, the enlargement of our productive capacity, so as to achieve the gradual substitution of home-grown for imported products; and third, the bringing of the Department into such close relations with the farmers of the country as would make them acquainted with our work and inspire them with confidence in our ability to serve them, as well as to impress more forcibly upon the responsible officers of the Department themselves the wants and conditions of the tiller of the soil. This report will not have accomplished its purpose fully unless it serves to satisfy you that these objects have already been measurably attained, and that, by steadily keeping them in view and extending and developing the means already adopted toward their accomplishment, we may reasonably entertain the hope of placing this Department upon a plane of usefulness commensurate with the fondest anticipations of all those who labored so long and so earnestly to raise the Department to its present official dignity, and to extend its opportunities for valuable work.

The time seems opportune for me to make some suggestions as to the best means of maintaining to the fullest extent the usefulness of the Department, and of still further developing its opportunities for the future. It is rarely given to any single man to superintend the completion of a great work which it has required a wide and mature experience to successfully plan, but the wise builder knows well that without a well-determined plan the building, when completed, will surely be found deficient in some respects. What this Department must eventually be in order to fully answer the expectations in which the farmers of the country have a right to indulge, and for which the National Government must make itself responsible, is the consideration which now deeply concerns me. The first thing to be done in considering this subject is to define the obvious functions of the Department so as, on the one hand, to fully meet all just expectations, and, on the other, to avoid any infringement on the sphere of work properly belonging to and undertaken by other legitimate agencies.

Primarily the work of the United States Department of Agriculture may be, I think, briefly summarized under two heads: First, scientifically, the collection and distribution of all information of practical value to the farmer in the culture of the soil; second, administratively, the control of all matters relating to agriculture coming under the head of interstate or foreign trade. The first involves the acquisition of information by special and intelligent observation and study of all known facts having a bearing upon the culture of the soil and the disposal of

the crops, and to this end we must be prepared to employ the highest order of expert talent, both practical and scientific. This first proposition also involves a careful scrutiny of all natural phenomena affecting agriculture, and continued research into the principles which underlie them, necessitating the very highest order of scientific investigation, both by experiments in the laboratory and experiments in the field. My second proposition involves the conferring upon the Secretary of Agriculture of the fullest powers necessary for the supervision and control of all interstate or foreign commerce in agricultural products and of fraudulent and other substitutes therefor, for the investigation of all animal diseases, and for the control of the movement of all animals which may be affected by communicable diseases, and even within certain limits for an adequate supervision of the trade in agricultural products in all foreign markets.

As the immediate result of an acceptance of this definition of the scope of the work devolving upon the Department, it is evident that our present facilities will need to be greatly enlarged. It may be objected, therefore, by those whose idea of good government never goes beyond the one idea of economy, or by those—of whom there are not a few—who, though willing to afford to the Government all the means necessary for the efficient transaction of its business, utterly fail to appreciate or to estimate the full importance of the work of a department exclusively devoted to the field of agriculture, that a complete equipment of this Department on the lines which I have indicated would involve too great an expenditure. To such I would reply by calling their attention to the fact that in another twenty years the population of this country will exceed 100,000,000 persons, of which number more than 30,000,000 will be actually engaged in gainful occupations, and that probably 40 per cent of these will be directly engaged in agricultural pursuits, and that upon their efforts not less than 40,000,000 of people will be directly dependent for a living, while the whole population indirectly will depend for its well-being and prosperity upon the success which will attend the efforts of those devoted to agriculture.

When that day comes, and the increase of land values and enlarged demands of increased population and of a greatly increased foreign trade shall have necessitated the development by artificial means of vast areas now uncultivated, the efforts of this Department on such lines as I have laid down will have increased the value of our annual agricultural products from between \$3,000,000,000 and \$4,000,000,000 to at least twice that enormous sum. In the face of such stupendous figures, which it needs no prophetic vision to clearly see, I submit that the largest sum necessary for the efficient carrying on of the work I have indicated will be comparatively insignificant.

Very respectfully, your obedient servant,

J. M. RUSK,
Secretary.

PAPERS

ACCOMPANYING

THE REPORT OF SECRETARY OF AGRICULTURE

REPORT OF CHIEF OF BUREAU OF ANIMAL INDUSTRY.

SWINE PLAGUE.

In the course of the year a special report of 160 pages was submitted, which embodied all the investigations which we have had the opportunity to make. In this report the records of the experiments and observations are published in full, and we give now only a brief summary of the practical deductions, which may be of value to those interested in rearing swine.

The investigations had led to the conclusion that there is a disease of swine mainly limited to the lungs different from the cholera. This disease is largely associated with hog cholera, so that it is impossible to estimate what percentage of the losses are due to it. Its distribution seems to be as wide as that of hog cholera. It is caused by bacteria, readily distinguished from hog-cholera bacilli in a variety of ways. These bacteria in pure cultures can be made to produce by inoculation the disease itself in healthy animals. Moreover, the disease is communicable, as was demonstrated in 1890, by placing healthy and diseased pigs in the same pen. The undoubted case of swine plague produced in this way is described in the Special Report, on page 69. The proof that swine-plague bacteria do produce a fatal infectious disease is thus complete, and any further discussion of this part of the subject is useless. The problems which have arisen in connection with this disease, as to its origin, its communicability, its prevalence, its mortality, have been greatly complicated by its frequent association with hog cholera. Nevertheless we have gained some important knowledge which, though by no means complete in itself, is destined to shed light not only on this disease, but on kindred diseases of other domesticated animals.

As far back as 1887 the writer, having studied the properties of the swine-plague bacteria, found them very perishable. The question then arose how they were transferred from animal to animal and from place to place. If they perish quickly in the soil and water by drying, etc., it seemed very likely that they were communicated chiefly by animals themselves. We examined the mouth and throat of various herds of apparently healthy swine, and found in some of them bacteria not distinguishable from those of swine plague, excepting that they were, as a rule, less virulent. We then extended our investigations to other

domestic animals and found that in their air passages the same kind of bacteria were frequently present.* In some animals, as in cats, for instance, they were of exceptional virulence. We thus came upon the important fact that in the mouths and upper air passages of cats, dogs, cattle, horses, and pigs bacteria exist which are practically identical, but which may vary considerably in virulence or disease-producing power. This implies a wide distribution of this group of disease germs, if it should be found that the same condition of things prevails in different regions and latitudes of our country. We have thus far examined only animals from the District of Columbia and a few Western steers, so that we are not yet entirely prepared to assume a similar distribution over the whole country.

Given these facts concerning the distribution of this group of swine-plague bacteria and their varying virulence, we may assume as probably true that—

(1) Swine are being constantly exposed to these bacteria by coming into contact with other domesticated animals.

(2) Swine are not likely to be infected by attenuated or but slightly virulent varieties of these bacteria unless the infection is aided by other causes of a debilitating character.

(3) Very virulent varieties of swine plague may produce extensive outbreaks, and hence the same preventive measures are necessary which have been laid down for hog cholera.

(4) In many epizootics of swine disease both hog-cholera and swine-plague bacteria, as well as the respective lesions of these bacteria, coexist. Such mixed diseases indicate wide distribution of these two kinds of bacteria.

(5) The same group of bacteria produces disease in different domesticated animals, and we may safely assume the occasional transmission of such disease from one species to another.

In the following pages we have endeavored to discuss and illustrate these propositions just laid down. In so doing we are well aware of the fact that they are not yet fully demonstrated. In applying facts of science, it is often necessary to anticipate actual demonstration of a presumed truth, especially when we are thereby put on the conservative side and our attention is aroused to probable dangers in the future.

(1) If we assume that the majority of swine are exposed to swine-plague bacteria in one of the various ways indicated, and that only a small number succumb to the infection, there must exist certain favorable or unfavorable conditions. These pertain either to the animal or to the bacteria, or to both together.

The conditions which make animals more susceptible to infection are as varied as the conditions which reduce their vitality. The importance of rearing and keeping animals in such a manner as to produce and maintain a healthy action of the various functions of the body has not been insisted upon with as much emphasis as it deserves, owing to the somewhat overshadowing influence which the study of pathogenic bacteria has exerted upon all minds. It is evident, however, that veterinary hygiene has much to do with the decline of large epizootics, not only by keeping away the germs of the disease, but by enabling the animal body to resist their attacks. Of those conditions of swine which invite disease very little is as yet positively known, and we simply call attention to a few to arouse the interest of those who are in position to make observations.

There have been indications during the course of experiments at the Bureau Station that the breed may have some influence in predisposing to infection. As an illustration, we may cite an experiment in vaccina-

* See Swine Plague Report, p. 151, for details of experiments.

tion of swine against hog cholera carried on at the station in 1889-90.* The vaccination, which consisted in subcutaneous inoculation of culture liquid, seems to have had no effect; for, when the time for exposure came, practically all pigs from one lot succumbed and all from another lot survived. The latter were Essex grades reared in pens; the former, grades of mixed Jersey Reds and Chester Whites not raised in pens. While it is impossible to give any facts as to the relative resistance of different breeds to swine diseases, it is a subject which should receive the due consideration of swine-breeders, especially in those States where swine diseases are more or less stationary. Age is another important element. We have found a decided difference in the susceptibility to both hog cholera and swine plague in favor of older swine. This element of age is familiar to all with reference to certain human maladies, such as scarlet fever, measles, diphtheria, and some other diseases which preferably attack the young.

Feeding is perhaps the most important factor in predisposing swine to disease. The assimilation of large quantities of food and its conversion into fat seems to be the one essential function of swine. This goes on to such a degree as to lead to pathological conditions after a time. Not only the ingestion of large quantities of food, but of one kind for a long time, is in itself opposed to the habits of such omnivorous animals. Besides overfeeding upon one kind of food we have the uncleanly surroundings in which swine are apt to be kept, contributing materially to the collection and maintenance of bacteria of various kinds, which may be injurious. In addition to the unhealthy modes of existence to which swine are subjected, and partly springing from them, are certain pathological conditions induced by animal parasites of different kinds. The life history of some of the most important parasites infecting swine is still to be elucidated. As a rule, we have found in our post-mortem examinations a larger number and variety of internal parasites in those herds which have been allowed to run freely than those brought up in pens. The opportunities for infection seem to be much greater in the former case than in the latter.

As to the damage done by parasites it is difficult to form an accurate estimate from ordinary observation. Obvious damage may be done in the air passages by lung worms (*Strongylus paradoxus*), and in the small intestine by *Ascaris* and *Echinorhynchus*. The lung worms may be met with in all seasons of the year in swine up to three months old. They invariably inhabit the terminal portion of the two large bronchi of the principal lobes. Here there is generally a partial or total occlusion of the bronchus for 1 or 2 inches from the caudal border of the lobe, due to the lung worms and the enveloping mucus. In some cases the occlusion is followed by collapse and broncho-pneumonia of the lobes supplied by the bronchus and its branches. The hepatized lung tissue assumes a bright or pale red color. When the lung worms are very abundant larger branches of the same bronchus become filled with the parasites, and the broncho-pneumonia may extend over a greater portion of the principal lobes. That lungs in this condition are more susceptible to the invasion of swine-plague bacteria will be generally admitted. The bronchitis, begun where the lung worms mature, may extend after a time into the other air tubes.

Another question arises with reference to lung worms. Do they carry infectious germs into the lungs? This question can not be answered until more is known of the life history of these parasites.

* Report of the Secretary of Agriculture for 1890, p. 110.

Meanwhile the evidence would hardly support the opinion that they introduce the virus. The pneumonia usually begins in the small ventral lobes and travels from them, while the lung worms begin their injurious work in the principal lobes farthest removed from the ventral lobes. All that can be said is that they may make the lungs more susceptible to the disease.

In the intestines *Ascarides* are not infrequently found extending into the common bile duct from the duodenum. Some even enter the gall bladder, while others imbed themselves in the ducts coming from the various lobes of the liver and completely obstruct the flow of bile. The *Echinorhynchus* is well known as attaching itself to the mucous membrane of the small intestine and producing ulcerous depressions, simulating those of hog cholera.

That there may be other predisposing causes at certain seasons of the year, such as obscure malarial diseases due to protozoa, the invasion of the muscular system by psorospermia (sarcosporidia), trichinae, etc., need simply to be mentioned, since no positive evidence is at hand.

The most important factor in the production of swine plague and hog cholera is the virulence of the bacteria. In the report referred to much experimental evidence is presented to show how much the disease-producing power of swine-plague bacteria from different outbreaks may vary. The same is true of hog-cholera bacilli. It may be laid down as a general rule that the more virulent the bacteria the more severe the resulting epizootic, and the greater the mortality. While a more attenuated variety of bacteria may spare the older and more hardy animals of a herd, these will succumb to a more virulent variety. Attenuated or weaker varieties of swine-plague bacteria may attack the young and the badly kept swine, those infested with parasites and those of poorer breeds, while the stronger may not become diseased. This may explain also why some herds of swine are destroyed and neighboring ones escape, although both may have had the same opportunities of infection.

How do we know that some of these bacteria have more disease-producing power and others less? This problem is solved by experimental inoculation of swine and smaller animals. We have already called attention to the various grades of virulence among hog-cholera bacilli. The same statements apply to swine-plague bacteria. In the report quoted, cultures of swine-plague bacteria from Germany were shown to be the most virulent, for they were fatal when only a small quantity was introduced under the skin. Of our own varieties none produced disease when introduced under the skin (excepting in a single case), but it was necessary to inject them into the blood or into the lungs to produce a fatal result.

There is an important practical lesson to be drawn from these facts. Although there may be infectious swine diseases in a given locality which carry off now and then a few animals, such diseases may not become widely distributed because not sufficiently virulent, and particularly well kept herds or certain breeds may escape disease even though exposed to infection. But what is to prevent a very virulent variety of hog-cholera or swine-plague bacteria from being brought into such a locality at any time, of developing into an epizootic, and sweeping off animals whether old or young, weak or strong? The actual existence of disease should not close the eyes of swine-breeders to even greater dangers due to the importation of still more virulent and destructive varieties of the same disease. In other words, even the constant presence of swine disease should not make the owners of herds careless in the application of preventive measures.

(2) If, then, it is very important to guard against the importation of swine-plague bacteria in diseased herds as having the highest degree of virulence, what are the vehicles by which such swine-plague bacteria are conveyed from place to place?

In the Report on Swine Plague it was pointed out that swine-plague bacteria are far less hardy than hog-cholera bacilli. The former perish rapidly in water and in liquids unsuited to their multiplication. They survive drying for a few days only. In general, they speedily disappear after they have left the body of diseased swine, and it is highly doubtful whether they would survive a month in the soil or in pens. Such agencies as streams, manure, etc., which may distribute hog-cholera bacilli over considerable distances, are of restricted importance in swine plague. The chief danger lies in contact with diseased or infected swine. Intermediate carriers of infection can only act for a short time, while swine may harbor disease germs for months in localised inflammations, such as abscesses under the skin and in the joints, and it is possible that they may vegetate on the mucous membranes of the air passages indefinitely.

Swine must thus be regarded as the chief vehicle of infection. This may be conveyed directly from diseased to healthy animals; it may be conveyed by those which have passed through the disease, and hence by older to younger swine. It is safe to assume that any swine which have at any time been exposed to swine plague (or hog cholera) are liable to convey the disease, because we do not know when the specific disease germs leave the body.

Other sources of danger are railroads leaving fresh manure in different places, the vicinity of slaughterhouses, rendering establishments, or any other places where the viscera of swine may be scattered or where numbers of living swine are temporarily housed. If we bear in mind the wide distribution of infectious swine diseases it is easy to believe that in any large herd of swine collected from different localities there are always liable to be some diseased or infected. It is essential, therefore, in guarding against disease, to look with suspicion upon all swine the history of which is not known, to some extent at least.

There is a practice current in some parts of the country of gathering together herds of young pigs from various localities through the intervention of dealers. In regions where swine diseases are prevalent much of the time, and where the virus never dies out, this is a specially dangerous practice. While swine may not be visibly diseased, or may simply appear somewhat unthrifty, they still may carry the seeds of a virulent outbreak within them which need but a little time to gain the required momentum. The mild character of a disease in any one animal is no evidence of the character of the germ; for this mildness may be due to a very virulent germ acting upon a highly insusceptible animal and causing a more prolonged chronic disease. In fact, these partly insusceptible animals are the most likely to appear in the markets, because they are the remnants of herds destroyed by disease. We have frequently been able to demonstrate by experimental inoculations the general accuracy of these statements. Thus, bacteria obtained from inoculated cases in which the disease had taken a more chronic course had not lost any of their virulence. In experiments bearing on vaccination we have been able to increase the insusceptibility of rabbit guinea-pigs so that virulent bacteria produced only a mild form of disease, prolonged from days to weeks and even months. Yet bacteria cultivated from such cases and injected into animals not vaccinated showed no loss of virulence. Again, we have found swine

bacteria in swine inoculated two months previously but apparently well at the time of examination, and in case of hog cholera we have found the bacilli in the organs of swine six to seven months after apparently unsuccessful inoculations. These bacteria possessed the original virulence.

The question has frequently arisen in the course of these investigations, Whether the bacteria are ever introduced into herds in the food? This involves another question, Whether hog-cholera or swine-plague bacteria do exist independently of diseased or healthy animals? As to both kinds of disease germs there is at present no evidence to show that they live outside of the animal organism, except temporarily, and that if the food happens to be infected, the infection has come from animals directly or indirectly, and that it is simply a question of time whether such infection is still in a living condition or not. Food, however, may be infected with other pathogenic bacteria which may become dangerous in producing secondary and perhaps fatal lesions in animals already diseased.

(3) We have repeatedly called attention to so-called mixed diseases in which both hog-cholera and swine-plague bacteria are found. This can only be explained by a wide distribution of both hog-cholera and swine-plague bacteria. The practice, already alluded to, of purchasing pigs from many herds and localities and bringing them together to be fattened as one herd is the most successful method of bringing various grades of pathogenic bacteria together and of producing a mingling of two diseases. These mixed outbreaks may develop in other ways also. The disease may begin as hog cholera and become subsequently complicated with swine plague, or the reverse may be true; the disease may begin as swine plague and become complicated with hog cholera. In either case the most virulent variety will probably start the disease, and any attenuated hog-cholera or swine-plague bacteria, which are latent in some of the animals of the herd or have not yet been killed out of the soil and the surroundings from a former outbreak, may start into activity and thus produce a more fatal mixed disease. It is evident that such secondary attacks of attenuated bacteria would not take place if the animals had not been weakened by the primary disease. This may be the only way in which the great majority of the swine-plague bacteria in the air passages of healthy animals can exert any pathogenic effect whatever. It is equally difficult to understand how attenuated hog-cholera bacilli can act without assistance from swine plague unless we accept such an explanation as the following: In swine plague some cases are usually of a more chronic type. The disease lasts some time, and is associated with caseous changes in the lungs. Any hog-cholera bacilli have thus abundant opportunity to enter the weakened organism through the diseased lungs, for instance, and appear after death in cultures from the internal organs. For the same reason hog-cholera outbreaks are characterized by very feeble pathogenic activity of the hog-cholera bacilli, and often of a more prolonged duration and chronic character, which may be applied to swine plague, because the latter, even in its most virulent form, has been able to invade the weakened organism. In virulent outbreaks of either disease, however, there is no invasion of the other disease germs, and, consequently, no mixed disease, of course, that both kinds of bacteria are present in the herd.

There is no difference in the distribution of the two diseases where either one or both

plagues have been determined by bacteriological investigations maybe tabulated as follows:

Locality.	Character of plague.	
By the Bureau of Animal Industry:		
District of Columbia, numerous outbreaks, 1885-'90	Hog cholera	Swine plague.
Maryland, various outbreaks, 1885-'90	do	Do.
Virginia, various outbreaks, 1885-'90	do	Do.
Nebraska, 1886	do	Do.
Illinois (Geneseo), July, 1886	do	Do.
Illinois (Sadorus), September, 1886	Hog cholera	Do.
Illinois (Ottawa), November, 1891	do	Do.
Iowa, December, 1886	do	Do.
Iowa (Mason City), November, 1888	(?)	Do.
New Jersey (Johnsonburg), October, 1887	(?)	Do.
New Jersey (Pleasantville), July, 1890	(?)	Do.
Missouri (Chillicothe), 1890-'91	Hog cholera	Do.
Nebraska (1886-'88), by Billings	do	(?)
Maryland (Baltimore), by Welch and Clement	do	Swine plague.
South Carolina, by Bolton	do	Do.
Illinois, by Burrill	do	Do.
Kentucky, by Burrill and Shakespeare	do	Do.
Massachusetts (near Boston), by J. A. Jeffries	do	Do.

* The investigation in Iowa did not bring to light any hog-cholera bacilli, though the lesions suggest the presence of attenuated forms not accessible by the usual methods.

† In this small outbreak bacilli closely resembling those of hog cholera were found in the spleen. Their virulence, however, was very feeble. Subcutaneous inoculation had no effect on rabbits.

(4) The question whether the different species of domesticated animals on a farm may take from or transmit to swine the disease which we have been considering is of very great importance in view of the changing conditions of live-stock interests, which are going on in different directions in various parts of our country.

The problem may be stated as follows: Has the bringing together of different species of animals for the purposes of feeding, etc., on the same ground, a tendency to increase disease in one or the other species? Will swine take swine plague from cattle, and will they transmit it to sheep and horses, for example, or is the reverse ever observed?

Investigations and observations during the past thirteen years lend some color to such possibilities, and it becomes necessary at least to call attention to those engaged in raising and keeping farm animals to what has been determined in this direction, and to arouse their interest in the investigation of outbreaks of swine plague, especially as regards the immediate causes.

In the summer of 1878 there appeared in three royal game preserves, in the vicinity of Munich, in Bavaria, a very fatal epizootic among the wild boars and deer, of which 234 boars and 153 deer perished.* It was also noticed that even after the plague in the parks had apparently died out, disease among cattle in the neighborhood appeared, and this, according to the observations of veterinarians, was identical with the disease observed among the game in the parks.

The disease was very acute, lasting from twelve to thirty-six hours in the majority of cases. The chief lesions were croupous pneumonia, pleuritis, pericarditis, and mediastinitis. In cattle the disease appeared in two forms. In one a swelling was observed on the head, the face, the neck, or in the tongue, which assumed enormous proportions in six to twelve hours, and led to suffocation. The swelling was due to serous or serous and hemorrhagic infiltration. In the other form, in addition to the pneumonia, pleuritis, and pericarditis observed in the game, there was always present a severe hemorrhagic inflammation of the small intestine. At this time bacteriological methods were still undeveloped, and nothing is known of the nature of the bacteria causing this outbreak save the fact that they were not anthrax bacilli. A number of inoculations were made upon various animals, which testify to the extreme virulence of the specific bacteria.

Rabbits died six to eight hours and sheep and goats thirty to thirty-six hours after inoculation. Two old horses died after subcutaneous inoculation with blood from

* Bollinger. Ueber eine neue Wild- und Rinderseuche. München, 1878.

cattle in a very short time. A young steer one and one-half years old was fed with a thimbleful of the intestinal contents of a calf which had succumbed to an enormous swelling. The steer died in fifty-four hours with pneumonia and pleuritis. A pig inoculated subcutaneously over the left shoulder with a few drops of blood died in twenty-two hours. Besides an extensive erysipelatous swelling starting from the point of inoculation there was beginning fibrinous pleuritis.

The disease reappeared in the following years, either sporadically or in restricted outbreaks. In 1879 and 1880 it was observed among domesticated animals alone; in 1881 among the animals in the game preserves. In 1885 Kitt* published some investigations which were destined to throw more light upon this new plague. With blood from an outbreak among cattle resembling the epizootic described by Bollinger, Kitt made some inoculations upon small animals. Of mice, rabbits, guinea-pigs, and one pigeon inoculated, the mice and rabbits died within twenty-four to thirty-six hours, the pigeon in thirty-six hours. The guinea-pigs were not affected. Lesions were in general absent. The blood contained large numbers of bacteria. Subsequently the spleens of an ox, a young pig (of which eight had died), and a horse which had succumbed in the same locality, showed on microscopic examination the same bacteria, whose virulence tested on rabbits was likewise the same. In a cow inoculated subcutaneously over the left shoulder an extensive inflammatory oedema of the inoculated shoulder appeared, which extended over the entire left limb. The swelling later became converted into an abscess, but the animal did not die.

Of special interest is the subcutaneous inoculation of a pig with a minimum quantity of mouse's blood. From the place of inoculation on the right thigh a bluish discoloration of the skin spread over the whole body in spots and patches, while there was considerable swelling at the place of inoculation. The pig was dead in twenty-four hours. The autopsy revealed, in addition to the lesions mentioned, exudative pleuritis and peritonitis, congestion of the mucous membrane of the upper air passages and of the stomach. A goat inoculated subcutaneously in the same manner was afflicted with extensive local inflammatory oedema and died within two days. A horse inoculated subcutaneously in the neck with a suspension from an agar culture, derived originally from the mouse, died within one and one-half days with extensive local reaction, fluid blood, ecchymoses on heart, pleuritis, and pericarditis, and beginning inflammation of the mucosa of the stomach. The bacteria found by Kitt have a marked resemblance to swine-plague bacteria, and their pathogenic effect on pigs and smaller animals is identical with that of very virulent swine-plague bacteria.

A disease probably identical with the foregoing was described by Oreste and Armanni,† as occurring among herds of young buffaloes in Italy. The disease appears very suddenly, and the animals attacked may die in from twelve to twenty-four hours. The symptoms are high temperature, rapid and feeble pulse, discharge of mucus from nose and mouth, associated with a local swelling on the head and face which leads to suffocation. The specific bacteria seem to be identical morphologically with swine-plague bacteria. The disease can be reproduced in young buffaloes by inoculation of cultures. It was similarly produced in a colt, a cow, a sheep, and in mice, rabbits, guinea-pigs, pigeons, and fowls. Death ensued in all animals in from one to three days. Of two young pigs inoculated one died, the other survived.

In France, Galtier‡ has found pneumo-enteritis of swine associated with a similar disease in sheep which came into contact with them. While there is much in favor of his assumption that the infection passed from the swine to the sheep, the description of the specific bacteria and of the methods of inoculation are not sufficiently complete and thorough to bring conviction as to the transmission, or furnish any definite information concerning the nature of the bacteria found. A few suggestions thrown out here and there are sufficient, I think, to permit us to exclude hog-cholera bacilli and regard them as belonging to the group under consideration.

These various investigations are of great importance in showing that some infectious diseases may either attack several species of domesticated animals at the same time, or be inoculable from one species to another. What is of special significance in the first two investigations is the extreme virulence of the bacteria. The same may be said of the Italian buffalo disease. The bacteria causing these outbreaks are, so

* Ueber eine experimentelle der Rinderseuche (Bollinger) ähnliche Infectiouskrankheit. Sitzungsberichte der Gesellschaft für Morphologie und Physiologie in München, I, 1885, s. 140-168.

† Atti del R. Istituto d'incoraggiamenti alle scienze naturali, etc., 1887. For a brief account see also Journal de Médecine Vétérinaire, 1887, p. 585, and Baumgarten's Jahresbericht for 1887, s. 124.

‡ Journal de Méd. Vét., 1889, *passim*.

far as it is possible to ascertain from the descriptions, all members of the swine-plague group of bacteria.

There is another class of infectious diseases, due to bacteria of the same group, which produce specific diseases among certain species of domesticated animals, but which diseases are not known to be communicable to other species. Among these are fowl cholera, rabbit septicæmia, and a peculiar form of pleuro-pneumonia in cattle, which Poels has called "septic pleuro-pneumonia." During the past three or four years the writer has examined in the laboratory of the Bureau of Animal Industry a small number of lungs from cattle affected with pneumonia, from which bacteria practically identical with swine-plague bacteria were isolated. A description and discussion of these forms of pneumonia in cattle will be reserved for a future report.

There is thus a wide distribution of diseases among domesticated animals due to a group of bacteria closely resembling and probably identical with swine-plague bacteria. Some diseases attack several species at the same time; others are, so far as we know, restricted to one species. We have also seen that there is a wide distribution of attenuated varieties among the same domesticated animals in the healthy state, inhabiting, so far as our investigations have gone, the upper air passages. Some observers are inclined to regard these different bacteria as practically the same. Hüppe has proposed the name *Septicæmia hæmorrhagica* for all the forms of disease caused by them. Other observers hesitate to accept at present this unifying explanation. For practical purposes the following explanation, based on quite extended study of this group of bacteria, may serve as a provisional guide in the prevention of disease:

The real test of the power of any bacteria to produce disease is virulence. The greater the virulence the more liable will be the disease to spread from one species to another. This is strikingly illustrated by the *Wildseuche* of Bollinger. The relative virulence can be accurately determined only by careful series of inoculations upon small and large experimental animals, performed in precisely the same way in each case with pure cultures of the bacteria. Again, the power of a given disease to pass from one species to another frequently remains unnoticed, partly because in many cases there is not sufficient opportunity for such transmission. The nature of food required for each, and other conditions lead to specialization in stock-raising, and tend to restrict each species to its own pasture ground.

It is not unreasonable to suppose that bacteria living in the air passages of one species, and harmless to it to a certain degree, may prove to be disease germs with reference to another species. Thus the attenuated bacteria living in the air passages of healthy cats, dogs, pigs, and cattle are all fatal to rabbits and some to pigs. In general the larger and more powerful the animals the less effect disease germs have upon them. It is, therefore, possible that some of the outbreaks of swine disease in the Western States may be due to the cattle with which the swine are herded for feeding purposes. The bacteria in cattle, harmless to them, or perhaps causing only mild disease and rarely observed, may prove the starting point of disease for swine.

While we have no positive demonstration of these statements, it is desirable that those engaged in stock-raising should have their attention called to the possibilities embodied therein.

(5) In regard to the general measures to be taken and the rules to be observed in the prevention of hog cholera and swine plague, we refer the reader to the Report of the Secretary of Agriculture for 1888,

page 156, or the Report of the Bureau of Animal Industry for 1887-'88, page 148, or the Special Report on Hog Cholera, 1889, page 123. The rules and directions there formulated are adapted as well to swine plague, for the bacteria of the latter disease are even more easily destroyed by various agencies than are hog-cholera bacilli. In the following pages only the most important points are touched upon.

The things with which healthy swine should not come into contact are, in the order of their importance, first of all, diseased herds and animals, strange swine the history of which is not known, offal from establishments using carcasses of swine, recently infected ground, railroads carrying swine, and polluted streams. Soil and water may be infected by living and dead swine or any offal from them.

When the disease has actually appeared in a herd the question generally arises whether it is worth while to make any attempts to save a portion of the herd or to leave them to their fate. As a rule it may be stated that it is best to slaughter both healthy and diseased at once and give the surroundings sufficient time to rid themselves of the infection before fresh animals are brought into them. If this be not desirable we should recommend the following measures to be rigorously carried out:

(a) Removal of still healthy animals to uninfected grounds and pens as quickly as possible

(b) Destruction of all diseased animals.

(c) Careful burial or burning of carcasses.

(d) Repeated thorough disinfection of the infected premises.

(e) Great cleanliness both as to surroundings and as regards the food.

If the animals have been removed to uninfected grounds, careful watching is necessary to remove therefrom at once all swine which show signs of disease.

Among the various disinfectants which can be recommended are the following:

(1) Slaked lime, in the proportion of about 5 per cent (one-half pound of lime to a gallon of water).

(2) Equal volumes of crude carbolic acid and ordinary sulphuric acid mixed together and added to water in the proportion of 2 ounces to a gallon of water (14 volume per cent).

(3) Sulphuric acid, added to water in the proportion of 1 ounce to a gallon.

(4) Boiling water.

(5) Corrosive sublimate (mercuric chloride), in the proportion of 1 drachm to a gallon of water (1 to 1,000).

Solution No. 2 is said to be more active if, while the sulphuric acid is being added to the crude carbolic acid, the vessel containing the latter is placed in cold water to prevent undue heating of the liquid.

It should be borne in mind that sulphuric acid and corrosive sublimate attack metals, and that the solutions are best made in wooden pails, etc. Corrosive sublimate is also highly poisonous, and the solution should not be made stronger than indicated. The lime is, on the whole, the best and cheapest, but it may not be desirable to use it everywhere; hence one of the others may be substituted. Each of the solutions recommended is more than strong enough to kill hog-cholera and swine-plague bacteria and they need not be increased in strength.

When swine have become infected while running over tracts of ground, disinfection of such tracts may be regarded as practically impossible. If, however, they have been brought up in pens or in small inclosures, disinfection should be thoroughly carried out. The wood-work of pens may be disinfected by exposing all portions, cracks and corners, to the action of any of the solutions mentioned. These may

be applied with a broom or any other household article which insures uniform wetting. Whitewash is useful for woodwork of fences, etc., when there is no objection to its appearance. Its action is only exerted at the time of application, and after it has dried it will not destroy bacteria subsequently adhering to it. It must, therefore, be applied fresh every time disinfection is needed. For large farms some kind of spraying apparatus would be of great service in insuring uniform distribution of the disinfectant. In the selection care must be exercised, however, owing to the corrosive action of some of the solutions. The disinfection of the surface of the soil over small areas is perhaps best accomplished by the slaked lime or the crude carbolic-acid solution. It should be remembered that both preparations may be irritating to the feet of animals immediately after they have been applied. The feeding troughs should receive special attention, and after the application of the disinfectant this should be washed away with water, preferably hot or boiling.

The directions thus far given apply mainly to the prevention of disease. When animals have been actually attacked, can any thing be done for them? It has already been stated that treatment of communicable diseases is not a desirable thing, but even if it were the deaths follow each other so rapidly in many outbreaks that there is no time for the application of remedies. If, however, an effort to treat them is to be made, it is desirable to avoid the various specifics and remedies of unknown composition, some of which, thoroughly tested at the Bureau Station by Dr. F. L. Kilborne, were of no avail in checking the disease. The sick animals should be isolated one from another, as far as possible confined in small inclosures, kept quiet, and fed with moderate quantities of food, preferably with milk, if this is to be obtained. If the swine are being fattened when the disease appears, this process should be stopped at once and a light diet substituted. The tendency towards the localization of disease in the large intestine, in both swine plague and hog cholera, seems to be due, at least in part, to the constipated habits of the pig, which permit the pathogenic bacteria to remain long enough in the intestine to act injuriously upon the mucous membrane. Constipation is not easily overcome, as the trials with various cathartics have demonstrated, and it is highly important when the disease has appeared to feed a greater variety in small quantity or to follow the recommendation of giving the digestive organs a complete rest by feeding milk. The boiling of food may be desirable, inasmuch as it destroys any disease-producing bacteria which may be present, and makes digestion easier. An experiment carried out at the Bureau Station with boiled food did not show any more favorable results, however, than with unboiled food ordinarily given, so we can simply suggest it for further trial.

Even if treatment should succeed after much trouble and expense to save some few swine, it may not be profitable, owing to the injury inflicted on the various organs during the disease. The lungs are, as a rule, seriously affected. They may become adherent to the walls of the thorax, and the pericardium may become thoroughly attached to the heart and impede its action. These permanent injuries, which no kind of treatment yet suggested can avoid, exercise an injurious influence on the proper development of the animal affected, and make its raising of questionable advantage. It has already been stated that such recovered animals may, for a time at least, be dangerous as carriers of the disease germs to other swine.

The only encouraging line of action, therefore, lies in the prevention

of disease by the observance of suitable precautionary measures, and in that general practice of hygienic laws which thus far has been the only means of checking the rapid spread of epidemics in the human family. The method first suggested by Pasteur of inoculating animals with attenuated cultures to make them resist any and every attack of a given infectious disease is, theoretically considered, the simplest means of prevention. Practically, however, there are two general objections which are growing in importance year by year, as our knowledge of infectious diseases is becoming broader and deeper. The method of Pasteur may distribute the specific bacteria far and wide and become a source of future evil, since we do not know but that the attenuated bacteria may in some way regain their former virulence. The other objection rests on the fact that diseases differ so much one from the other that the method seems to insure success in only a few diseases of a certain character. Provided the animals are actually protected by inoculation, the first objection might be set aside in regions in which the disease prevails at all times.

As regards swine plague, the experiments which have thus far been carried out indicate that this disease may prove amenable to preventive inoculation. We have been able, by the injection of both living cultures and those sterilized at a low temperature (58° C.), to make the most susceptible animals, rabbits, insusceptible to the most virulent swine-plague bacteria. By two subcutaneous injections of cultures of swine-plague bacteria, swine have been made insusceptible to doses injected into the circulation, which proved fatal to "control" pigs within twenty-four hours. In the preliminary experiments upon rabbits, designed to produce immunity, several methods were employed.*

(1) Minute but gradually increasing quantities of culture liquid of very attenuated swine-plague bacteria were injected at different intervals into the ear vein of rabbits. Only a very small proportion of these survived the test inoculation with very virulent swine-plague bacteria.

(2) Sterilized bouillon cultures were injected into the abdomen and into the circulation of rabbits. This method also produced immunity and partial resistance, but in only a comparatively few animals.

(3) The preceding method was modified in the following manner: Swine-plague bacteria from outbreak IX were allowed to produce for two days a rich growth upon agar. This growth was scraped off and a very turbid suspension of bouillon prepared and sterilized at 58° C. With this sterilized suspension injections were made into the abdomen of rabbits as follows:

Rabbit No.	May 4.	May 8.	May 14.	May 22.	Total.	Remarks.
	cc.	cc.	cc.	cc.	cc.	
35.....	1.5	1	2	3	7.5	Inoculated with virulent swine plague, May 26. Check dies over night. All three survive with considerable local reaction.
36.....	2	.5	2	3	7.5	
37.....	1	1.5	2	3	7.5	Inoculated with virulent swine plague, May 19; dies in 6 days with severe local reaction, pleuritis and pericarditis. The check dies in 16 to 20 hours.
38.....	.5	2	2	.....	4.5	

These results show very decisively the protective effect of the sterilized growth of swine-plague bacteria. Additional experiments have not yet been made. In conjunction with Dr. Kilborne, the protective effect of swine-plague cultures was tested upon swine in the following experiment: Seven pigs belonging to the same lot and about four months old were chosen, three of which were set aside as "control" animals or checks. The remaining four received, February 28, 1891, a subcutaneous injection of 6 cubic centimeters of peptone-bouillon culture of virulent swine-plague bacteria, one-half into each thigh. As a result one died. The remaining three were reinoculated in the same way March 14, receiving on this date 10 cubic centimeters of culture liquid. April 3, these, together with the three control animals or checks, received the final test inoculation; 2 cubic centimeters of peptone-bouillon culture of the same bacteria were injected into a vein of the leg of each animal. Two of the control

* These experiments were carried out in conjunction with Dr. V. A. Moore.

animals died within twenty-four hours, the third in thirty-six hours. None of the three vaccinated animals became ill. No symptoms of disease or lesions appeared subsequently.

These experiments simply demonstrate the fact that swine may be protected from fatal doses by subcutaneous injection. Whether this process would be successful in natural outbreaks can not be inferred from this test alone.

REPORT OF THE CHEMIST.

SIR: I beg leave to submit herewith an abstract of the work of the Division of Chemistry during the year 1891.

Respectfully,

Hon. J. M. RUSK,
Secretary.

H. W. WILEY,
Chemist.

EXPERIMENTS WITH SUGAR BEETS.

For the purpose of promoting the culture of sugar beets, looking to the manufacture of sugar, an experiment station was established in the State of Nebraska, at Schuyler. Thirty acres of land were leased in the early winter and prepared for planting in the spring. The intention of taking so large a field was to permit the practice of systematic rotation with the object of having the same plat of land in beets only once in four years. This would give $7\frac{1}{2}$ acres for the planting of each year. The experimental field is located near the junction of the Shell Creek Valley with the Platte River Valley. It is about 6 miles north of the Platte River, and is protected on the north and west by a range of hills about 50 feet high. The soil of the field is a dark loam about $2\frac{1}{2}$ feet in depth. This rests upon about $1\frac{1}{2}$ feet of clay and sand, gradually merging into a fine sand to a depth of about 5 feet. It is a loose porous soil of excellent quality.

The field selected for the beets had not been in previous cultivation, but had been used as a pasture for many years. A field which had been previously tilled would have been preferred for the purposes of our work, but it was found difficult to get such a field in a suitable location. For the purpose, however, of testing soil previously cultivated, a part of the planting was made in a different field which had been several years in cultivation, but with a northern instead of a southern exposure.

The seed bed was prepared as early in the spring as the weather would permit, by plowing to the depth of 8 or 9 inches and subsoiling to the depth of 5 or 6 inches. The surface of the soil was placed in proper tilth by harrowing and rolling, and the field was ready for planting in the latter part of April and the 1st of May.

The north field was planted beginning on the 29th of April. The seed was put in with a drill from 1 inch to $1\frac{1}{4}$ inches in depth. The seed was planted in rows 17 inches apart, and at the rate of 15 to 20 pounds per acre. After planting the ground was rolled. Six varieties were planted, viz: (1) Klein Wanzlebener, furnished by Dippe Bros., of Quedlinburg; (2) White Improved, furnished by Vilmorin & Co.,

Paris; (3) Desprez variety; (4) Variety from Lemaire; (5) Variety furnished by Knauer; (6) Klein Wanzlebener Elite.

The plats in the south field, viz, the regular station field, were planted on the 5th and 6th of May. The whole month of May remained quite dry, and the seeds germinated poorly. Rains in June, however, brought the beets on rapidly and necessitated thinning, which was completed in all the plats by June 18.

The cultivation of the beets consisted simply in keeping the surface of the ground in good tilth and preventing the growth of weeds. It was accomplished jointly by horse and hand hoes. A good stand of beets was secured on all the plats, and the months of June and July were especially favorable to a rapid and vigorous growth of the plants. By the time of the accession of dry weather in August they had secured such a hold as to enable them to bear the drought of that month without much injury. From September 23 to October 8 measured plats of the different varieties were harvested in order to determine the comparative yield per acre. Three square rods of each variety were gathered for this purpose. The weight of beets per acre was as follows:

	<i>Tons.</i>
Klein Wanzlebener Elite.....	20.56
Knauer.....	21.28
Lemaire.....	23.49
Desprez.....	26.42
Vilmorin.....	25.80
Klein Wanzlebener.....	24.60

In the north field the yield per acre was as follows:

	<i>Tons.</i>
Klein Wanzlebener Elite.....	18.10
Knauer.....	17.7
Lemaire.....	18.4
Desprez.....	21.2
Vilmorin.....	21.1
Klein Wanzlebener.....	22.5

The analyses of the samples of beets were commenced on the 15th of September, and consisted in examining a large number of beets individually and then in lots of ten, taking all the beets as they came. In this way a strict average comparison of the beets could be obtained. The varieties examined at different times show the influence of ripening or decay upon the content of sugar. The results of the various examinations are found in the following table:

Field A.

Variety.	Date.	Sucrose in juice.	Purity.
		<i>Per cent.</i>	
Klein Wanzlebener Elite	Sept. 12	12.6	75.9
	Oct. 13	14.5	84.6
	Oct. 31	14.2	83.0
Knauer	Sept. 12	11.5	75.7
	Oct. 14	14.8	88.0
	Nov. 2	13.2	82.1
Lemaire.....	Sept. 12	11.5	77.2
	Oct. 15	14.1	83.5
	Nov. 2	12.6	80.0
Desprez.....	Sept. 12	13.2	76.7
	Oct. 16	14.4	84.6
	Nov. 2	12.6	80.9
Vilmorin.....	Sept. 12	13.1	76.3
	Oct. 17	14.6	84.9
	Nov. 2	13.1	83.6
Klein Wanzlebener.....	Sept. 12	13.6	77.7
	Oct. 19	14.5	82.8
	Nov. 2	13.0	79.7

Field B.

Variety.

Klein Wanslebener Elite
 Knauer
 Lemaire
 Despres
 Vilmorin
 Klein Wanslebener

The quantity of sugar produced per acre by the two fields is given in the following tables:

Field A.

Variety.

Klein Wanslebener Elite
 Knauer
 Lemaire
 Despres
 Vilmorin
 Klein Wanslebener

Field B.

Klein Wanslebener Elite
 Knauer
 Lemaire
 Despres
 Vilmorin
 Klein Wanslebener

It was to be expected, from well-known facts, that the growing of beets on practically increase the tonnage per acre at the expense the beets. It is gratifying, however, to see from the average content of sugar in the beets harvested by the increased tonnage. It should be noted that this increased tonnage is due to the fact that the beets are grown very closely together, and thus kept from becoming too large, the average weight of the beets grown upon the field is less than it should be, but it was thought best to have a fair comparison than to have overgrown beets with a low content of sugar.

It will be of interest to compare the results during its first year with the average results in the beet-sugar countries of Europe. It will be found that this is hardly a fair comparison, but it should be noted, even on the strong virgin soils of this country, the average sugar content and saccharine strength compares very favorably with the results obtained in field culture in Europe.

The full details of the work of the experiment station will be given in Bulletin No. 33, now in course of preparation.

YIELD OF BEETS PER TON—PERCENTAGE OF YIELD OF SUGAR IN BEETS IN EUROPE COMPARED WITH THE RESULTS OBTAINED AT SCHUYLER.

In respect of the tonnage of beets per acre and the average content of sugar in the beet for the different countries of Europe, it is difficult to give definite statements. The yield given in the official reports is the percentage of sugar obtained on the weight of the beet. We may safely assume, however, that between 80 and 85 per cent of the total weight of sugar in the beet is recovered in the process of manufacture. In regard to the tonnage per acre, the most reliable statements which we have access to give the following:

For the season of 1890-'91.

Austria-Hungary.....	tons per acre..	9.8
France	do...	11.3
Germany.....	do...	13.8

The yield on the experiment station of the Department at Schuyler, Nebr., during the past summer, average of all plats, was 21.7 tons per acre. In explanation of this, however, it should be said that the soil on which these beets were grown was practically a virgin soil, very fertile, and, therefore, the yield must be regarded as abnormally high. It is not infrequent, however, in Europe, to obtain 20 and even 25 tons per acre in exceptional circumstances, but this is not obtained in the beet fields taken as a whole. It is thought, however, that with the natural fertility of the soil of this country we may expect, when rational agriculture is introduced and with proper artificial fertilizers, to obtain an average yield of from 16 to 17 tons per acre.

In regard to the content of sugar in the beets, the following statements can be made:

The percentage of sugar obtained in Austria-Hungary during the season of 1890-'91 on the weight of beets secured was 11.02. Assuming that 80 per cent of the total weight of sugar in the beet was obtained, it would make the per cent of sugar in the beet 13.7.

The yield of sugar in France during the campaign of 1890-'91 on the weight of the beets worked was 11.61 per cent, which, on the same basis, would give the percentage of sugar in the beet 14.05.

The percentage of yield in Germany during the season of 1889-'90 was 12.35. Allowing as before 80 per cent of the sugar in the beets to be obtained, this would give the percentage of sugar in the beet 15.4. The yield of sugar for the campaign of 1890-'91 is stated to be practically the same.

The percentage of sugar in the beets grown by the Department at Schuyler was 13.8.

It is probable that a nearer value of the real content of sugar in the beets in Europe, calculated on the percentage of yield, would be obtained by using the factor 85 instead of 80. Calculated on this basis, the percentages would be as follows:

	Per cent.
Austria-Hungary	12.9
France	13.6
Germany	14.5

Collecting the above into tabular form, we have the following comparative statements:

Austria-Hungary
France
Germany
Schuyler

GROWTH OF SUGAR BEETS IN DIFFERENT P

In order to comply with a general demand for sugar beets, 5½ tons of seed were purchased from the firm of Linburg, of the Klein Wanzlebener variety; 1 ton from Vilmorin, Andrieux et Cie, of Paris, of the same variety, and 1½ tons were purchased from the firm of Grand Island, Nebr., of German and

These seeds were put up in packages averaging 100 pounds each, making in all 13,500 packages, and were sent at the same time there was sent to each person receivers' Bulletin No. 3, giving instructions for the culture of the beets. This bulletin is still available for those who write for it. Full directions were also sent to each person sending them to the Department for analysis. The data obtained for each State are as follows:

Table showing mean composition of beets in each State, based on analyses of samples from various counties.

State.	Samples.	Sucrose in beet.	Purity.	State.
	Number.	Per cent.	Per cent.	
Arizona	2	7.69	56.9	Nebraska
Arkansas	2	6.39	58.9	Nevada
California	9	11.06	76.0	New Hampshire
Colorado	46	13.61	77.6	New Mexico
Connecticut	5	11.20	78.9	New York
Georgia	2	11.02	64.9	North Dakota
Idaho	1	12.73	74.9	Ohio
Illinois	36	11.15	75.0	Oklahoma Territory
Indiana	71	11.90	77.6	Oregon
Indian Territory	1	12.40	81.6	Pennsylvania
Iowa	314	11.39	75.3	South Dakota
Kansas	36	10.92	71.2	Tennessee
Kentucky	3	8.26	60.9	Texas
Maryland	2	7.75	68.5	Virginia
Michigan	46	12.77	77.9	Washington
Minnesota	34	11.56	74.7	Wisconsin
Missouri	11	10.93	73.5	Wyoming
Montana	40	13.14	72.5	New Jersey

NOTE.—It is necessary to give a number of precautions to be observed, so that he may not misapprehend the data given in the preceding samples.

In the first place it must be remembered that these data were expressed to the Department, and, with the exception of those obtained near at hand, several days necessarily elapsed from the time until they were received for analysis. Careful experiments have shown that which are harvested and exposed, even when wrapped in paper, dry very rapidly, and therefore the quantity of sugar analyzed is greater really than it possesses in the normal form, that the data given for the content of sugar will be too high. Again, it is not fair to compare States which

for instance, like Idaho, Arkansas, Arizona, Maryland, Kentucky, etc., with those States which furnished several hundred samples, like Iowa, South Dakota, and Wisconsin. The data must be taken simply to represent the character of the samples sent, and can not be reasonably construed to indicate the suitability of the soil and climate of any particular State for the production of sugar beets. It must, however, be allowed that in those States, such as Oregon, Washington, and Montana, where the results are exceptionally high, the data show a peculiar suitability to the production of beets rich in sugar.

The State of Washington, with eleven samples, shows the best results of all, producing beets which had an average of 14.75 per cent of sugar, with a purity of 84.2. Next to Washington comes Oregon with 33 samples, showing 13.95 per cent of sugar and 84.5 purity. Other States showing excellent results are—

	Per cent.
Nevada	13.87
Colorado	13.61
New Mexico	13.42
Wyoming	13.04
Michigan	12.77
South Dakota	12.20
Indiana	11.90
Minnesota	11.56
Nebraska	11.44
Wisconsin	11.41
Iowa	11.39

One notable result is that in the arid regions where irrigation is practiced the beets produced are almost uniformly of a high character. The fine results obtained in Washington and Oregon are also most encouraging, inasmuch as in many States, especially on the Pacific coast, the winters are much milder than can be expected in Minnesota, Iowa, Nebraska, and the two Dakotas.

In a general way it is fair to say that with our present knowledge of the subject the culture of the sugar beet, for sugar-making purposes, is more likely to succeed in arid regions where irrigation is practiced and where the winters are mild, and on the Pacific coast, where the beets can be grown without irrigation and where the winters are also mild. This is not said in any way to discourage the introduction of the culture of the beet into other localities which show beets of fair quality but which are subject to winters of greater severity. As has already been indicated, the early advent of killing frost and freezing weather is a matter of serious consequence to beet-growers, interfering, as it does, with the proper harvesting and preservation of the beets.

Great difficulty is experienced in securing common methods of culture and harvesting the samples of beets. There are many cases in which the yield per acre of beet roots reported is absurdly high, reaching, in one case, 99 tons per acre. Any yield exceeding 25 tons per acre which is reported is looked upon with suspicion, and it is probable that the experimenter has made some mistake in determining the yield. While it is not impossible to grow 25 tons of sugar beets to the acre, yet it is very improbable that such a yield should be obtained if all the conditions necessary to the production of beets are observed.

In general, it may be said that the percentage of sugar which has been obtained in these general experiments is satisfactory. When it is remembered that in a great majority of cases many of the conditions necessary to success were doubtless neglected, and when it is further considered that the samples were subjected to every variety of cultivation and to almost every vicissitude of climate, the results can not but be regarded as satisfactory. It is evident, however, that investigations of this kind are not sufficient to secure the introduction of the beet-sugar industry.

The growth of a very small plat of beets is quite different from the cultivation of a large area, and it is yet very problematical whether the farmers of this country will be willing, as a class, to engage in beet culture as long as other forms of agriculture, less onerous and less expensive, prove remunerative. The culture of the sugar beet is essentially a practice of the highest class of agriculture, and will probably

not be very popular until the farming lands of our country are more valuable. When farming lands get to be worth from \$200 to \$300 per acre, the yield of maize and wheat will probably not be sufficient to pay the rental on land of that price. In such case the farmers will be compelled to look for a crop which, under intensive culture, will bring a larger return. Such a crop is evidently to be found in the sugarbeet.

In many cases capital has been found waiting to engage in the manufacture of beet sugar, but the promoters of the factory have found it impossible to secure the coöperation of farmers in sufficient numbers to insure a crop of reasonable magnitude. The purpose, therefore, of building a factory in such a locality was given up under compulsion.

Perhaps more serious difficulties in connection with the beet-sugar industry will be found in climatic conditions.

As has been pointed out before, in both annual and special reports of this Department, the area of our Northern States, especially the North Central States, suitable to the production of sugar beets is very large, and it has also been shown by the cultural experiments mentioned above that beets of fine saccharine strength and of large average tonnage per acre can be grown in these localities. The difficulties, however, of having the beets harvested and well secured before the accession of cold weather are very great. Especially during the present season, severe cold weather was experienced over many parts of the Northern Central States very early in November. It is reported that many thousands of tons of beets which had been grown for the use of factories in those localities were lost through this freezing temperature. It is quite certain that in all localities in our North Central States, and in all localities exposed to the frosts which are likely to occur from northwestern blizzards, arrangements will have to be made by the farmer to have his beet crop harvested and secured by the 1st of November. It is even to be feared that in some seasons the late October days may not be wholly secure against these sudden incursions of northern blizzards.

Whether or not the facilities afforded by these localities for the growth of beets will be considered a sufficient offset for the difficulties attending these climatic catastrophes, experience alone will show. To the region on the Pacific coast these remarks about climate do not apply. The winters of California, Oregon, and Washington are milder than those which prevail in the beet-growing regions of Europe, and it would be only fair to expect the most rapid increase in beet-sugar factories in those localities. Long experience has shown that beets will grow on the Pacific coast with fair tonnage and fair content of sugar, and the winters by their mildness afford exceptional opportunities for manufacture. It must not be supposed, however, that the severity of the winter must be considered an insuperable difficulty in the establishment of a beet-sugar industry. While the cost of siloing the beets may be a little greater, it will not be sufficiently great to wholly destroy the profit of the industry. Full details respecting the beets grown from the seed distributed by the Department will be found in Bulletin No. 33.

SYSTEMS OF TAXATION AND BOUNTY.

Many inquiries are received by the Department in regard to the fiscal system of European nations in respect of sugar beets. In order to supply the required information on this subject, the following digest of the laws of European countries manufacturing beet sugar is given. This digest contains the substance of the law now in force, or about to

come into force, in those countries. Appended to this digest is the United States law relating to the bounty on sugar, concerning which numerous inquiries have been directed to this Department; also the law of Canada.

GERMANY.

The law which is at present in force in Germany in regard to the taxation of beet sugar, and the payment of bounties and rebates on exported sugar, went into effect on the 1st of August, 1888, and will expire by limitation of the Reichstag on the 1st of August, 1892.

By the terms of this law beets entering into manufacture are taxed 80 pfennigs (\$0.1904)* per 100 kilograms (220.5 pounds)†. This is a reduction of 90 pfennigs from the old law. One of the great innovations of the new law was the imposition of a tax on all sugar entering into consumption in the German Empire of 12 marks (\$2.856)‡ per 100 kilograms. The rebates on exported sugar under the present law are as follows:

- (1) For raw sugar polarizing at least 90 per cent, and for refined sugar containing less than 98 per cent, but at least 90 per cent of sugar, 8.50 marks.
- (2) For candies and sugars in white hard loaves, etc., or crushed in the presence of revenue officers, and for all sugars of at least 99.5 purity, 10.65 marks.
- (3) For all other hard sugar not containing over 1 per cent of water, and containing at least 98 per cent of sugar, 10 marks.

The amounts stated are for 100 kilograms.

It is thought that the present bounty or profit accruing to the manufacturers amounts to about 2.12 marks per 100 kilograms. The amount of tax collected in Germany for the campaign of 1889-'90 was as follows:

	Marks.	Dollars.
Tax on raw beets.....	78,600,315	= 18,706,874.970
Amount paid in bounties.....	65,900,745	= 15,684,377.310
Cost of collection, etc.....	3,144,011	= 748,274.618
Net receipts for the tax on beets.....	9,555,557	= 2,274,222.566
Net receipts from tax on sugar entering into consumption	50,814,291	= 12,093,804.258
Making total net receipts of the German treasury from the beet tax.....	60,369,848	= 14,368,023.824

The following are the chief provisions of the new law in the German Empire, which was passed on the 31st of May, 1891, to go into effect on the 1st of August, 1892: (1) Tax on sugar entering into consumption, 18 marks per 100 kilograms; (2) the duty on imported sugar is fixed at 36 marks per 100 kilograms.

The rebates on exported sugar are paid on three classes of sugar, viz: A. Raw sugar polarizing at least 90° and under 98°; B. Candied, loaf, and other sugars polarizing at least 99.5°; C. Hard sugar containing not more than 1 per cent of water, crystals, lumps, etc., polarizing at least 98°.

The amount of drawback on each of these classes is fixed as follows:

From the 1st of August, 1892, to the 31st July, 1895:

A.....	1.25 marks per 100 kilograms.
B.....	2.00 marks per 100 kilograms.
C.....	1.65 marks per 100 kilograms.

From the 1st of August, 1895, to the 31st July, 1897:

A.....	1.00 marks per 100 kilograms.
B.....	1.75 marks per 100 kilograms.
C.....	1.40 marks per 100 kilograms.

* The value of 1 pfennig is about a quarter of a cent, United States currency.

† The value of 1 kilogram is 2.2046 pounds avoirdupois.

‡ The value of 1 mark is 23.8 cents, United States currency.

The provisions of the rebate last for only five years, and this is called the transition period, after which no rebate in the form of a premium will be paid.

In case sugar which has been deposited in the warehouse has received the premium mentioned above, and is for consumption at home, the premium which was advanced is refunded to the treasury. A full description of the law is given in the "Zeitschrift des Vereins für die Rübenzucker-Industrie," p. 571 *et seq.*

FRANCE.

In France a new law in regard to the taxation of sugar was promulgated in the Journal Officiel of the 30th of July, 1891, to take effect on the 1st of September, 1891. It reads:

ARTICLE 1. Commencing from the 1st September next to the campaign, the legal yield per 100 kilograms of beets worked is fixed at 7,750 kilograms.

Where the actual yield of any factory does not exceed 10 kilograms of refined sugar per 100 kilograms of beets, no excess is admitted to the benefit of the reduced duty. Where the excess is admitted to the benefit of the reduced duty, the excess is subject to this reduced duty, duty being half at the full rate of 60 francs per 100 kilograms of refined sugar.

Those manufacturers who, previous to the 1st January, 1891, shall make declaration at the Bureau de la Régie, shall renounce any claim to the benefit of the present law. The legal yield shall be allowed a drawback of 15 per cent of their manufacture. Sugars on which this drawback is subject to a duty equal to that applicable to the excess yields.

The *prise-en-charge* (legal yield) fixed by the present article applies definitely under one or two conditions of levying duty above defined, whatever may be the deficit.

ART. 2. The drawback on manufacture allowed to distillers by article 6 of the law of August 5, 1890, is maintained from the campaign of 1891-'92.

ART. 3. Molasses delivered from one factory to another under official supervision is credited to the manufacturing account of refined sugar per 100 kilograms of molasses. It is subject to duty where delivered for the quantity of refined sugar for which a drawback has been credited. Only molasses already worked for more than 50 per cent 100 of absolute sugar is subject to the present law.

ART. 4. No modification with regard to the fixing of the drawback, which may be the object of further legislation, shall be made after the expiration of one year from the promulgation of the present law.

Temporary provision.

ART. 5. For the campaign of 1890-'91 a drawback of 15 per cent of the duty manufactured shall be allowed to those sugar manufacturers who, before the expiration of five days after the promulgation of the present law, shall renounce any claim to the drawback on sugar obtained above the legal yield.

The last paragraph but one of article 1, cited above, relates to the sugars representing this drawback.

The tax on imported sugar in France is 60 francs per 100 kilograms.

*The value of 1 franc is 19 cents, United States.

As will be seen, the manufacturer pays at the rate of 30 francs for all sugar in excess of the legal yield of 7.75 kilograms up to 10.5 kilograms. On all sugar over this he pays the full tax of 60 francs per 100 kilograms on one-half of the excess above 10.5 and 30 francs per 100 kilograms on the other half.

The following computation may be made of premiums received by the French manufacturers of sugar when they export it under the present law:

If the beets yield 11 per cent of sugar, the premium amounts to 8.85 francs per 100 kilograms. If the yield be ten per cent, the premium amounts to 8.25 francs per 100 kilograms. If the yield be 9 per cent, the premium will amount to 5.70 francs per 100 kilograms. It is also seen that by one of the conditions of the law all manufacturers are guaranteed certain premiums if they renounce any claim to the excess over the legal yield. They will then receive a fixed premium of 4.50 francs per 100 kilograms, being 15 per cent of 30 francs duty which is to be paid. It should also be stated that there is an extra tax of 7 francs per 100 kilograms on all beet sugar imported into France. This tax is not collected on cane sugar imported. In short, according to the new law, it appears that the French Government will guaranty to manufacturers of sugar a minimum premium of 4.50 francs per 100 kilograms of sugar. For those manufacturers who work with rich beets, the premium will vary from 8 to 9 francs per 100 kilograms, according to the richness of the beets.

AUSTRIA-HUNGARY.

In Austria the duties on imported sugar, payable in gold, are as follows: On white sugar, 50 francs per 100 kilograms; on raw sugar below 19, Dutch standard, 37.50 francs per 100 kilograms; on sirups, glucose, and molasses, 15 francs per 100 kilograms; there is a duty on indigenous sugar entering consumption of 23.65 francs per 100 kilograms.

When sugar is exported, the following direct premiums are paid:

	Francs.
Per 100 kilograms of sugar polarizing from 88 to 93	3.22
Per 100 kilograms of sugar polarizing from 93 to 99.5	3.44
Per 100 kilograms of sugar polarizing from 99.5 to 100	4.94

The annual maximum of premiums is not to exceed 5,000,000 florins,* or 10,750,000 francs. If the premiums on exported sugar exceed this sum, the excess is to be reimbursed by the sugar factories in proportion to their production. A bond is given by the factories to secure this reimbursement. This bond is 11,000 florins or 23,650 francs (\$4,564.450) for each sugar factory.

RUSSIA.

In Russia the new sugar law which has just gone into effect contains the following provisions. The duty on imported sugar is as follows:

For refined sugar	97.68 francs per 100 kilograms.
For brown sugar	73.26 francs per 100 kilograms.

The minister of finance has authority to lower this duty to 36.63 francs per 100 kilograms if the price of sugar reaches 6 (\$3.528) to 6.5

*The value of the Austrian florin in francs as given above is 2.15. The ratio in gold coin as fixed by the United States Treasury is 1.88 francs.

(\$3.822) rubles* per pood† (36.068 pounds) at St. Petersburg, or 5 to 5½ rubles per pood at Kieff.

The excise duty for sugar in consumption amounts to 17.27 francs per 100 kilograms. Beginning with the campaign of 1892-'93, a supplementary duty will be imposed on refined sugar of 40 kopecks ‡ (\$0.23) per pood, equivalent to 6.83 francs per 100 kilograms; so the total tax for sugar entering consumption from that time will be 24.10 francs per 100 kilograms of refined sugar. The excess of the import tax over the tax on consumption will then be as follows:

For raw sugar.....	73.26—17.27=55.99 francs per 100 kilograms.
For refined sugar.....	97.63—24.10=73.53 francs per 100 kilograms.

Admitting that the Government will reduce the duty on imported sugar to the minimum of 1.50 rubles in gold per pood, there will still remain for the manufacturer of sugar in Russia an assured premium, on exportation, of 19.36 francs per 100 kilograms for raw sugar, and 12.53 francs per 100 kilograms for refined sugar. At the present import duty, however, the premiums are greater than that mentioned above.

HOLLAND AND BELGIUM.

In Holland as well as in Belgium the tax upon raw sugar is fixed upon the volume and density of the juice. The legal yield is fixed at 1.46 kilograms of refined sugar or 1.65 kilograms of brown sugar per hectoliter of juice for each degree of density. The tax amounts to 27 florins, equivalent to 56.43 francs, per 100 kilograms of refined sugar. The duty on imported sugar in Holland is as follows:

Candied sugar of the first class, 31.86 florins, equivalent to 66.59 francs, per 100 kilograms.

Candied sugar of the second class, 28.89 florins, equal to 60.38 francs, per 100 kilograms.

White sugar polarizing above 99°, 27 florins, equal to 56.43 francs, per 100 kilograms.

Raw sugars, for each degree of polarization, .27 florins, equal to .58 francs, per 100 kilograms.

The minimum amount of money which the treasury is to receive from sugar is fixed by law for the campaigns of 1892-'93 and 1893-'94 at 8,500,000 florins (\$3,417,000). Any deficit in this amount is to be made up by the sugar manufacturers.

SWEDEN.

The duty on indigenous sugar entering consumption is one-half of the duty on imported sugar from May 22, 1891, for sugars below No. 19, Dutch standard. The duty is collected on the weight of beets entering the factory, assuming that the yield in raw sugar is 6.25 per cent on the weight of beets worked.

The rate of duty on imported sugar below No. 18 is 23.5 kronen, equal to 33 francs, per 100 kilograms.

The tax on home-grown raw sugar is therefore 11.75 kronen, equal to 16.5 francs, per 100 kilograms.

*The value of 1 ruble is about 77 cents, United States currency.

†The value of 1 pood is 36 English pounds avoirdupois.

‡The value of 1 kopeck is about 0.60 cents, United States currency.

DENMARK.

The duty on imported sugar is fixed at the following rates from October, 1891: White sugar above No. 18, Dutch standard, 6 oere* per livre;* white sugar above 9, Dutch standard, 3 oere per livre; white sugar darker than above, 2 oere per livre; molasses and sirup, 1 oere per livre; indigenous sugar is taxed for consumption at the rate of 2.25 oere per livre for sugar above No. 19.

If, however, the total quantity of sugar made does not exceed 32,000,000 kilograms (70,547,200 pounds), then the manufacturers are not required to make good the deficit. The amount of deficiency which each manufacturer is compelled to pay shall in no case ever exceed 6 florins per 100 kilograms of the excess of sugar over the minimum fixed above.

The amount which each manufacturer is compelled to pay is fixed by the minister of finance, and is to be paid within a month after its publication in the *Journal Officiel*.

ITALY.

From November 21, 1891, the duties on sugars imported into Italy are as follows: Sugar of first class, per 100 kilograms, 92 francs; sugar of second class, per 100 kilograms, 76.75 francs. Sugars of first class include all above 20, Dutch standard, or polarizing above 98 degrees.

The excise tax on sugar of domestic production is as follows: For sugars of first class, per 100 kilograms, 63.15 francs; for sugars of second class, per 100 kilograms, 55.95 francs.

Indigenous sugar is fostered, therefore, by a protective duty equal to the difference between the tariff on imported sugars and the excise tax on indigenous sugars. This amounts in sugars of the first class to 28.85 francs per 100 kilograms, and in sugars of the second class to 20.80 francs per 100 kilograms.

CANADA.

The governor in council may authorize the payment, out of the consolidated revenue fund of Canada, under such regulations and restrictions as are made by order in council, to the producers of any raw beet sugar produced in Canada wholly from beets grown therein, between the 1st day of July, 1891, and the 1st day of July, 1893, of a bounty of \$1 per 100 pounds, and, in addition thereto, 3½ cents per 100 pounds for each degree or fraction of a degree over 70 degrees shown by the polariscopic test.

UNITED STATES LAWS IN REGARD TO SUGAR.

[Act of October 1, 1890, 26 Stat., 567.]

Bounty on sugar.

On and after July first, eighteen hundred and ninety-one, and until July first, nineteen hundred and five, there shall be paid from any moneys in the Treasury not otherwise appropriated, under the provisions of section three thousand six hundred and eighty-nine of the Revised Statutes, to the producer of sugar testing not less than ninety degrees by the polariscope, from beets, sorghum, or sugar cane grown within the United States, or from maple sap produced within the United States, a bounty of two cents per pound; and upon such sugar testing less than ninety degrees by the polariscope, and not less than eighty degrees, a bounty of one and

* 1 livre = 200 grams; 100 oere = 1.40 francs.

three-fourths cents per pound, under such rules and regulations as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, shall prescribe.

Notices, applications for license, and bonds.

The producer of said sugar to be entitled to said bounty shall have first filed prior to July first of each year with the Commissioner of Internal Revenue a notice of the place of production, with a general description of the machinery and methods to be employed by him, with an estimate of the amount of sugar proposed to be produced in the current or next ensuing year, including the number of maple trees to be tapped, and an application for a license to so produce, to be accompanied by a bond in a penalty, and with sureties to be approved by the Commissioner of Internal Revenue, conditioned that he will faithfully observe all rules and regulations that shall be prescribed for such manufacture and production of sugar.

Licenses.

The Commissioner of Internal Revenue, upon receiving the application and bond hereinbefore provided for, shall issue to the applicant a license to produce sugar from sorghum, beets, or sugar cane grown within the United States, or from maple sap produced within the United States, at the place and with the machinery and by the methods described in the application; but said license shall not extend beyond one year from the date thereof.

No bounty shall be paid to any person engaged in refining sugars which have been imported into the United States, or produced in the United States upon which the bounty herein provided for has already been paid or applied for, nor to any person unless he shall have first been licensed as herein provided, and only upon sugar produced by such person from sorghum, beets, or sugar cane grown within the United States, or from maple sap produced within the United States. The Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, shall from time to time make all needful rules and regulations for the manufacture of sugar from sorghum, beets, or sugar cane grown within the United States, or from maple sap produced within the United States, and shall, under the direction of the Secretary of the Treasury, exercise supervision and inspection of the manufacture thereof.

Payment of bounties—No bounty upon less than five hundred pounds.

And for the payment of these bounties the Secretary of the Treasury is authorized to draw warrants on the Treasurer of the United States for such sums as shall be necessary, which sums shall be certified to him by the Commissioner of Internal Revenue, by whom the bounties shall be disbursed, and no bounty shall be allowed or paid to any person licensed as aforesaid in any one year upon any quantity of sugar less than five hundred pounds.

Penalties.

That any person who shall knowingly refine or aid in the refining of sugar imported into the United States, or upon which the bounty herein provided for has already been paid or applied for, at the place described in the license issued by the Commissioner of Internal Revenue, and any person not entitled to the bounty herein provided for, who shall apply for or receive the same, shall be guilty of a misdemeanor, and upon conviction thereof shall pay a fine not exceeding five thousand dollars, or be imprisoned for a period not exceeding five years, or both, in the discretion of the court.

Import duties—Beet-sugar machinery free until July 1, 1892.

All sugars above number sixteen Dutch standard in color shall pay a duty of five-tenths of one cent per pound: *Provided*, That all such sugars above number sixteen Dutch standard in color shall pay one-tenth of one cent per pound in addition to the rate herein provided for, when exported from, or the product of, any country when and so long as such country pays or shall hereafter pay, directly or indirectly, a bounty on the exportation of any sugar that may be included in this grade which is greater than is paid on raw sugars of a lower saccharine strength; and the Secretary of the Treasury shall prescribe suitable rules and regulations to carry this provision into effect: *And provided further*, That all machinery purchased abroad and erected in a beet-sugar factory and used in the production of raw sugar in the United States from beets produced therein shall be admitted duty free until the first day of July, eighteen hundred and ninety-two: *Provided*, That any duty collected on any of the above-described machinery purchased abroad and imported into the United States for the uses above indicated since January first, eighteen hundred and ninety, shall be refunded.

Sugar candy and all confectionery, including chocolate confectionery, made wholly or in part of sugar, valued at twelve cents or less per pound, and on sugars after being refined, when tintured, colored, or in any way adulterated, five cents per pound.

All other confectionery, including chocolate confectionery, not especially provided for in this act, fifty per centum ad valorem.

Glucose, or grape sugar, three-fourths of one cent per pound.

Provisions take effect April 1, 1891.

That the provisions of this act providing terms for the admission of imported sugars and molasses, and for the payment of a bounty on sugars of domestic production, shall take effect on the first day of April, eighteen hundred and ninety-one: *Provided*, That on and after the first day of March, eighteen hundred and ninety-one, and prior to the first day of April, eighteen hundred and ninety-one, sugars not exceeding the number sixteen Dutch standard in color may be refined in bond without payment of duty, and such refined sugars may be transported in bond and stored in bonded warehouse at such points of destination as are provided in existing laws relating to the immediate transportation of dutiable goods in bond, under such rules and regulations as shall be prescribed by the Secretary of the Treasury.

Free list.

Sugars, all not above number sixteen Dutch standard color, all tank bottoms, all sugar drainings and sugar sweepings, sirups of cane juice, melada, concentrated melada, and concrete and concentrated molasses, and molasses.

Conditional duty on sugar.

That with a view to secure reciprocal trade with countries producing the following articles, and for this purpose, on and after the first day of January, eighteen hundred and ninety-two, whenever, and so often as the President shall be satisfied that the Government of any country producing and exporting sugars, molasses, coffee, tea, and hides, raw and uncured, or any of such articles, imposes duties or other exactions upon the agricultural or other products of the United States, which in view of the free introduction of such sugar, molasses, coffee, tea, and hides into the United States he may deem to be reciprocally unequal and unreasonable, he shall have the power, and it shall be his duty, to suspend, by proclamation to that effect, the provisions of this act relating to the free introduction of such sugar, molasses, coffee, tea, and hides, the production of such country, for such time as he shall deem just, and in such case and during such suspension, duties shall be levied, collected, and paid upon sugar, molasses, coffee, tea, and hides, the product of, or exported from, such designated country, as follows, namely:

All sugars not above number thirteen Dutch standard in color shall pay duty on their polariscopic tests as follows, namely:

All sugars not above number thirteen Dutch standard in color, all tank-bottoms, sirups of cane juice or of beet juice, melada, concentrated melada, concrete and concentrated molasses, testing by the polariscope not above seventy-five degrees, seventenths of one cent per pound; and for every additional degree or fraction of a degree shown by the polariscopic test, two-hundredths of one cent per pound additional.

All sugars above number thirteen Dutch standard in color shall be classified by the Dutch standard of color and pay duty as follows, namely: All sugar above number thirteen and not above number sixteen Dutch standard of color, one and three-eighths cents per pound.

All sugar above number sixteen and not above number twenty Dutch standard of color, one and five-eighths cents per pound.

All sugars above number twenty Dutch standard of color, two cents per pound.

Molasses testing above fifty-six degrees, four cents per gallon.

Sugar drainings and sugar sweepings shall be subject to duty either as molasses or sugar, as the case may be, according to polariscopic test.

Alcohol free of tax for making sugar from sorghum.

[Extract from act approved March 3, 1891, making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1892.]

That any manufacturer of sugar from sorghum may remove from distillery warehouses to factories, used solely for the manufacture of such sugar from sorghum, distilled spirits in bond free of tax, to be used solely in such manufacture of sugar from sorghum; that all distilled spirits removed as herein authorized shall be of an alcoholic strength of not less than one hundred and sixty per centum proof, and may be removed, stored, and used in the manufacture of sugar from sorghum, and when so used may be recovered by redistillation in the sugar factory of such sugar manufacturer under such bonds, rules, and regulations for the protection of the revenue and

the accomplishment of the purposes herein expressed as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, may prescribe.

Any person who removes or uses distilled spirits in violation of this provision, or the regulations issued pursuant thereof, shall, on conviction thereof, be fined not less than one thousand dollars nor more than five thousand dollars for each offense, and the spirits and the premises on which such spirits are used shall be forfeited to the United States.

REPORT OF THE STATISTICIAN.

THE MAIN CEREAL CROPS.

CORN.

There was estimated last year a loss of acreage, from abandonment in consequence of the severity of the drought in certain sections, of 6,000,000 acres of the breadth planted. That loss was substantially made good in the planting of the present year, the area harvested being placed at 76,204,515 acres, producing 2,060,154,000 bushels. The total for corn has only been exceeded once before, in 1889, when the estimated product was 2,112,892,000 bushels. The yield per acre is the same as in 1889, 27 bushels, which is a bushel more than the accepted average of former periods and about 3 bushels more than the average of the last ten years. This yield will assure those who view statistics with nearsighted vision that the fertility of our cornfields is not exhausted, and that other causes of crop shortage must be considered in the fluctuations of yield that are the most noticeable feature of crop records.

The decadence of corn-growing in Illinois, with the constant tendency to diversification in progress there, and the prominence of maize in Iowa, where the estimates make an area of 9,560,716 acres and a product of 350,878,000 bushels, are noticeable changes in crop distribution. The order of prominence this year is Iowa, Illinois, Missouri, Nebraska, Kansas, Indiana, and Ohio in the corn surplus belt.

Fifty years ago corn was the great American crop, and it must long stand at the front in our arable culture. In 1840 the product was officially stated at 377,531,875 bushels. The present crop is nearly six times as large, though the population is less than four times as much as in 1840. It is remarkable that this production has so far outdistanced the movement of population, but the fact is due to its various uses in every branch of farm feeding and in meat production. The South was then the center of corn-growing, and Tennessee the first State in rank in its production, followed in order by Kentucky, Virginia, Ohio, Indiana, North Carolina, and Illinois. The movement of this center has been northward and westward, passing from Ohio to Illinois, and now beyond the Mississippi to Iowa. The estimates for 1891 are as follows:

Corn, 1891.

States and Territories.	Acres.	Bushels.	Value.
Maine.....	20,525	1,107,000	8865,780
New Hampshire.....	37,248	1,332,000	1,020,720
Vermont.....	57,638	2,144,000	1,629,542
Massachusetts.....	54,124	2,138,000	1,697,800
Rhode Island.....	13,045	450,000	355,542
Connecticut.....	58,662	2,112,000	1,605,420
New York.....	694,325	22,060,000	14,572,560

Corn, 1891—Continued.

States and Territories.	Acres.	Bushels.	Value.
New Jersey	369,915	12,343,000	\$8,023,140
Pennsylvania	1,397,211	46,527,000	26,520,462
Delaware	233,061	5,105,000	2,867,938
Maryland	740,425	18,881,000	10,006,844
Virginia	2,004,360	39,486,000	19,742,946
North Carolina	2,672,054	37,676,000	21,852,057
South Carolina	1,607,755	18,650,000	13,054,971
Georgia	3,109,745	37,829,000	26,102,071
Florida	496,342	5,460,000	4,367,810
Alabama	2,539,011	32,245,000	20,314,627
Mississippi	1,051,651	29,665,000	17,205,735
Louisiana	1,082,392	18,725,000	11,235,229
Texas	3,622,327	70,635,000	38,849,457
Arkansas	2,002,575	42,455,000	19,529,111
Tennessee	3,636,664	82,552,000	35,497,477
West Virginia	691,885	18,888,000	9,822,000
Kentucky	2,759,832	82,795,000	33,117,984
Ohio	2,940,268	94,092,000	38,577,628
Michigan	1,055,263	31,133,000	14,943,940
Indiana	3,712,389	123,622,000	46,976,457
Illinois	7,011,336	234,880,000	86,905,510
Wisconsin	1,113,042	29,718,000	13,076,017
Minnesota	814,556	21,580,000	8,418,436
Iowa	2,560,716	350,878,000	105,263,483
Missouri	6,796,318	203,210,000	77,219,765
Kansas	5,314,337	141,803,000	48,243,551
Nebraska	4,762,840	167,652,000	43,589,512
California	161,470	5,571,000	3,955,208
Oregon	9,613	260,000	181,281
Colorado	43,397	933,000	404,569
North Dakota	38,922	701,000	280,238
South Dakota	934,130	21,018,000	7,354,274
New Mexico	57,415	1,051,000	756,500
Utah	35,527	675,000	405,008
Total	70,204,515	2,060,154,000	836,439,228

For comparative purposes the record of former corn crops is presented. An examination of this record will disclose a range of yield from 18.6 bushels per acre in 1881 to 27.6 bushels in 1880. The low yields of 1881, 1883, 1886, and 1887 were due to drought. The absence of severe drought in most of the period from 1870 to 1889 accounts for the larger yields of that period. The past decade began and ended with a yield above the average. This record is as follows:

Years.	Total production.	Total area of crop.	Total value of crop.	Average value per bushel.	Average yield per acre.	Average value per acre.
	<i>Bushels.</i>	<i>Acres.</i>		<i>Cents.</i>	<i>Bushels.</i>	
1880	1,717,434,543	62,317,842	\$679,714,499	39.6	27.6	\$10.01
1881	1,194,916,000	61,262,025	759,482,170	63.6	18.6	11.82
1882	1,617,025,100	65,659,545	783,897,175	48.5	24.6	11.94
1883	1,551,066,895	68,301,889	658,051,485	42.4	22.7	9.63
1884	1,795,528,000	69,683,780	640,735,560	35.7	25.8	9.19
1885	1,930,176,000	73,130,150	635,674,630	32.8	26.5	8.69
1886	1,665,441,000	75,694,208	610,311,000	36.6	22.0	8.06
1887	1,456,161,000	72,392,720	646,106,770	44.4	20.1	8.93
1888	1,987,790,000	75,672,763	677,561,580	34.1	26.3	8.95
1889	2,112,892,000	78,319,651	597,918,829	28.3	27.0	7.63
Total	17,034,430,538	705,434,573	6,689,423,698			
Average for ten years—1880 to 1889	1,703,443,054	70,543,457	668,942,370	39.3	24.1	9.48
Average for ten years—1870 to 1879	1,181,486,954	43,741,331	504,571,048	42.6	27.1	11.54
1890	1,489,970,000	71,970,793	754,433,451	50.6	20.7	10.48
1891	2,060,154,000	70,201,515	836,439,228	40.6	27.0	10.98
Total	3,550,124,000	148,175,278	1,590,872,679			
Average for two years—1890 to 1891	1,775,062,000	74,087,639	795,436,340	44.8	24.0	10.74

The following table presents the record of exports of maize during the past twenty years, and shows that only about 1 bushel in 25 is exported in the form of grain, and that the exportation depends on the home price and has little influence in making home values:

Production and export of corn.

Years.	Production.	Exports.	Exportation.	Years.	Production.	Exports.	Exportation.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Per cent.</i>		<i>Bushels.</i>	<i>Bushels.</i>	<i>Per cent.</i>
1870.....	1,094,255,000	10,673,553	1.0	1882.....	1,617,025,100	41,655,453	2.6
1871.....	991,898,000	35,727,010	3.6	1883.....	1,551,000,895	48,258,698	3.1
1872.....	1,092,719,000	40,154,374	3.7	1884.....	1,793,528,000	52,876,436	2.9
1873.....	932,274,000	35,985,834	3.9	1885.....	1,876,176,000	64,829,417	3.4
1874.....	850,148,500	30,025,036	3.5	1886.....	1,665,441,000	41,308,584	2.5
1875.....	1,321,069,000	50,916,532	3.9	1887.....	1,450,161,000	25,360,969	1.7
1876.....	1,243,827,500	72,652,011	5.7	1888.....	1,987,796,000	79,841,672	4.0
1877.....	1,342,558,000	87,192,110	6.5	1889.....	2,112,892,000	102,418,768	4.8
1878.....	1,388,218,750	87,884,892	6.3	1890.....	1,440,976,000	32,041,528	2.2
1879.....	1,754,591,676	99,572,329	5.7				
1880.....	1,717,434,543	93,648,147	5.5	Annual average ..	1,455,989,084	56,091,372	3.9
1881.....	1,194,916,000	44,340,683	3.7				

WHEAT.

This country has led the van in wheat-growing for more than a decade and a half. France stands next, followed by India and Russia. This year's crop of the United States is the largest ever grown in any country, and the largest rate of yield ever recorded since the organization of this Department.

The population of the country is between three and four times as large as in 1840; the wheat crop of 1891 is seven times as large as at that date. Four and one-third bushels for each unit of population then; nine and one-fifth bushels now. There has been much written for twenty years past, the result of crude generalizing from agricultural data, to the effect that wheat-growing is declining, moving westward, abandoned in the old States and precociously developing in the new. The decline of flour-milling in Rochester is cited as evidence of inability of western New York farmers to produce wheat. Ohio, Michigan, Illinois, Dakota, and the Pacific coast are made almost simultaneously landmarks of progress in wheat-growing and monuments recording its decay. A little thought, a review of the whole field of fact, will show the kaleidoscopic changes incident to the work of diversifying and molding our primitive agriculture. Western New York produces as much wheat as ever, and fruit and vegetables and other products of tenfold greater aggregate value. So do Ohio and Michigan. Wheat is grown no less, but other products much more. Simply, wheat has passed out of the category of exclusive cropping, the primitive stage of agricultural development in which no real progress is possible.

The one point totally unknown to pessimists in breadstuffs is the possibility of an increase in yield per acre. The difference between the past season and the present is an advance in yield of almost 50 per cent, and an aggregate product, with the aid of some increase of area, of more than two hundred million bushels. The yield is now but 15.3, and should be made 20 at least by improved cultivation and judicious fertilization. Cases of yield at the rate of 50 bushels per acre are reported to this division by individual farmers, more at 30 to 40, and numerous records of 25 to 30 are made in New England, the Ohio Valley, and throughout the entire wheat belt, in some instances even in the South, where State

yields usually range from 6 to 12, in some instances 15 bushels. In the best wheat districts the average this year approximates 20 bushels, and in some States exceeds that figure. Returns from individuals of our special list of 125,000 farmers make an aggregate of more than twenty-two million bushels actually grown by them on nearly a million and a quarter acres, averaging an actual yield of 18 bushels per acre. This fact indicates the possibilities of increase of yield. The acreage cultivated the present year, if brought to a yield of 25 bushels per acre, equal to that of the sands of Holland and less than that of the gravelly clays of England, would produce a thousand million bushels of wheat. It will never be done while our land is so cheap, but can be done in the future, and should be. Our low usual rate of yield is simply a disgrace to American agriculture, but it will continue only while that agriculture remains in its primitive stage.

The following table gives the area, product, and value of wheat by States, as estimated at the close of the year by the Statistician:

Wheat, 1891.

States and Territories.	Aeres.	Bushels.	Value.
Maine.....	41,017	669,000	\$735,435
New Hampshire.....	8,972	148,000	170,244
Vermont.....	19,673	344,000	392,477
Connecticut.....	1,838	31,000	32,808
New York.....	640,540	10,635,000	10,632,964
New Jersey.....	138,833	2,124,000	2,209,111
Pennsylvania.....	1,337,437	20,864,000	20,864,017
Delaware.....	97,634	1,250,000	1,249,715
Maryland.....	540,494	8,107,000	8,107,410
Virginia.....	850,073	7,651,000	7,650,657
North Carolina.....	731,573	4,975,000	5,074,190
South Carolina.....	180,305	992,000	1,091,390
Georgia.....	309,743	2,323,000	2,555,380
Alabama.....	281,327	2,251,000	2,475,678
Mississippi.....	61,965	483,000	483,327
Texas.....	536,247	6,435,000	5,598,419
Arkansas.....	252,940	2,236,000	2,012,602
Tennessee.....	1,198,553	11,626,000	10,812,147
West Virginia.....	332,295	3,423,000	3,285,733
Kentucky.....	1,037,870	13,181,000	11,862,854
Ohio.....	2,062,603	45,531,000	41,888,070
Michigan.....	1,606,670	30,205,000	27,486,910
Indiana.....	2,017,518	52,807,000	45,414,085
Illinois.....	1,946,832	35,025,000	29,771,230
Wisconsin.....	996,128	13,043,000	10,955,892
Minnesota.....	3,143,917	55,333,000	43,159,692
Iowa.....	1,803,036	27,586,000	22,345,025
Missouri.....	1,802,082	25,732,000	20,585,852
Kansas.....	3,539,760	54,866,000	40,052,384
Nebraska.....	1,205,350	18,080,000	13,198,583
California.....	2,815,007	36,595,000	34,765,336
Oregon.....	602,055	13,149,000	11,571,160
Nevada.....	20,338	372,000	323,801
Colorado.....	100,832	2,037,000	1,486,868
Arizona.....	27,227	395,000	296,094
North Dakota.....	2,927,274	52,105,000	36,473,834
South Dakota.....	1,954,883	29,714,000	21,394,240
Idaho.....	90,531	1,811,000	1,520,921
Montana.....	92,803	1,856,000	1,559,090
New Mexico.....	93,328	1,073,000	880,083
Utah.....	136,764	2,393,000	1,795,028
Washington.....	698,040	12,216,000	9,161,775
Wyoming.....	5,500	110,000	90,200
Total.....	39,016,897	611,780,000	513,472,711

The following table presents the records of the past decade, in comparison with the averages of the preceding decade. Unlike corn, wheat presents nearly the same average of yield as in the ten years of 1870, and for two years of a new decade a higher rate than has been heretofore, due to the abnormal yield of the present year. It will be seen

that the aggregate value is far above that of any previous year, and \$142,000,000 more than the average of the last decade:

Years.	Total production.	Total area of crop.	Total value of crop.	Average value per bushel.	Average yield per acre.	Average value per acre.
	<i>Bushels.</i>	<i>Acres.</i>		<i>Cents.</i>	<i>Bushels.</i>	
1880.....	408,549,868	37,986,717	\$474,201,850	95.1	12.1	\$12.6
1881.....	383,280,090	37,709,020	456,880,427	119.2	10.2	12.2
1882.....	504,185,470	37,067,194	444,602,125	88.2	13.6	13.6
1883.....	421,086,160	36,455,593	383,649,272	91.1	11.6	10.2
1884.....	512,765,000	39,475,885	330,862,200	64.5	13.0	8.9
1885.....	357,112,000	34,189,246	275,320,390	77.1	10.4	8.6
1886.....	457,218,000	36,806,184	314,226,020	68.7	12.4	8.9
1887.....	456,329,000	37,641,783	310,612,960	68.1	12.1	8.5
1888.....	415,808,000	37,336,138	385,248,020	92.6	11.1	10.2
1889.....	490,560,000	38,123,859	342,491,707	69.8	12.9	8.9
Total.....	4,406,953,588	372,791,619	3,718,095,041	.....	.....	.....
Average, ten years, 1880 to 1889.....	449,695,359	37,279,162	371,809,504	82.7	12.1	9.7
Average, ten years, 1870 to 1879.....	312,152,728	25,187,414	327,407,258	104.9	12.4	12.6
1890.....	399,202,000	36,087,154	334,778,678	83.8	11.1	8.9
1891.....	611,789,000	39,916,897	513,472,711	83.9	15.3	12.6
Total.....	1,011,042,000	76,004,051	848,246,389	.....	.....	.....
Average, two years, 1890 and 1891.....	505,521,000	38,002,026	424,123,195	83.9	13.3	11.14

OATS.

The area of oats has been decreased by the semifailure of the previous crop, due to drought and the *aphis*, yet the higher rate of yield has brought the crop nearly up to the aggregate production of 1880. The estimates of the year are as follows:

Oats, 1891.

States and Territories.	Acres.	Bushels.	Value.
Maine.....	99,601	3,446,000	\$1,550,788
New Hampshire.....	31,359	1,098,000	504,880
Vermont.....	107,657	4,037,000	1,653,227
Massachusetts.....	23,275	768,000	360,895
Rhode Island.....	6,741	226,000	106,137
Connecticut.....	38,239	1,147,000	516,227
New York.....	1,329,984	41,894,000	15,912,968
New Jersey.....	158,706	3,884,000	1,553,567
Pennsylvania.....	1,239,101	33,704,000	12,470,313
Delaware.....	24,078	489,000	190,625
Maryland.....	111,944	2,127,000	808,236
Virginia.....	618,404	6,617,000	2,712,808
North Carolina.....	538,938	5,120,000	2,611,150
South Carolina.....	385,361	4,085,000	2,431,744
Georgia.....	618,626	7,238,000	4,242,734
Florida.....	52,469	598,000	370,831
Alabama.....	405,344	5,188,000	2,112,042
Mississippi.....	325,793	3,747,000	2,173,640
Louisiana.....	51,542	634,000	329,660
Texas.....	652,059	15,975,000	7,568,469
Arkansas.....	290,708	4,945,000	2,076,856
Tennessee.....	614,483	5,960,000	2,384,194
West Virginia.....	137,844	2,285,000	953,880
Kentucky.....	441,894	8,175,000	3,024,784
Ohio.....	911,292	28,523,000	9,412,735
Michigan.....	631,677	30,280,000	9,689,441
Indiana.....	895,067	21,034,000	6,739,904
Illinois.....	3,068,930	111,695,000	31,190,674
Wisconsin.....	1,481,019	49,248,000	13,817,417
Minnesota.....	1,425,080	52,015,000	14,044,163
Iowa.....	2,795,063	102,577,000	28,669,919

Oats, 1891—Continued.

States and Territories.	Acres.	Bushels.	Value.
Missouri.....	1,158,308	27,568,000	\$7,994,642
Kansas.....	1,237,740	37,132,000	10,025,694
Nebraska.....	1,308,977	48,599,000	11,177,697
California.....	84,786	2,416,000	1,449,841
Oregon.....	223,037	7,341,000	3,009,673
Colorado.....	109,790	3,579,000	1,380,079
North Dakota.....	406,926	10,647,000	4,328,225
South Dakota.....	724,092	23,388,000	5,847,043
Idaho.....	37,898	1,320,000	603,215
Montana.....	94,747	3,648,000	1,750,925
New Mexico.....	16,330	359,000	197,593
Utah.....	39,646	1,288,000	541,108
Washington.....	177,466	6,744,000	2,764,920
Total.....	25,581,861	738,394,000	232,312,267

The following table shows a marvelous advance in production of oats during the past decade, an increase of area of more than 50 per cent. The present rate of yield is the largest in that period, and exceeds the average rate of yield of the decade from 1870.

Years.	Total production.	Total area of crop.	Total value of crop.	Average value per bushel.	Average yield per acre.	Average value per acre.
	<i>Bushels.</i>	<i>Acres.</i>		<i>Cents.</i>	<i>Bushels.</i>	
1880.....	417,885,380	16,187,977	\$150,243,565	36.0	25.8	\$9.28
1881.....	416,481,000	16,831,600	193,198,970	46.4	24.7	11.48
1882.....	488,250,610	18,494,691	182,978,022	37.5	26.4	9.89
1883.....	571,302,400	20,324,962	187,040,264	32.7	28.1	9.20
1884.....	583,628,000	21,300,917	161,528,470	27.7	27.4	7.58
1885.....	629,409,000	22,783,630	179,631,860	28.5	27.6	7.88
1886.....	624,134,000	23,658,474	186,137,930	29.8	26.4	7.67
1887.....	659,618,000	25,920,906	200,690,790	30.4	25.4	7.74
1888.....	701,735,000	26,998,282	195,424,240	27.8	26.0	7.24
1889.....	751,515,000	27,462,316	171,781,098	23.9	27.4	6.26
Total.....	5,843,958,390	219,963,755	1,808,694,119			
Average, ten years, 1880 to 1889.....	584,395,839	21,996,376	180,866,412	30.9	26.6	8.22
Average, ten years, 1870 to 1879.....	314,441,178	11,076,822	111,075,223	35.3	28.4	10.03
1890.....	523,621,000	26,431,369	222,048,486	42.4	19.8	8.40
1891.....	738,394,000	25,581,861	232,312,267	31.5	28.9	9.08
Total.....	1,262,015,000	52,013,230	454,360,753			
Average, two years, 1890 to 1891.....	631,007,500	26,006,615	227,180,377	36.0	24.3	8.74

DISTRIBUTION AND CONSUMPTION OF BREADSTUFFS.

CORN.

The crop of 1890 was the smallest reported in nine years, in proportion to population, as the previous one was the largest. The reduction is about 30 per cent, from 2,113,000,000 to 1,490,000,000. It is not strange that the law of supply and demand, which even speculators can not nullify, should have raised the average price, as established by the December returns, from 28.3 cents to 50.6, nor that the former rate should be the lowest in nine years, or the latter the highest.

This rise in price was not brought about by the wisdom of growing for a larger area was planted in 1890, in the hope of a still larger harvest. But the forces of nature were adverse, and the resulting disaster was a blessing in disguise.

The comparison of stock on hand and quantity consumed on the 1st of March is as follows:

March 1—	Product of previous year.	On hand March 1.	Per cent.	Consumed & distributed.
	<i>Bushels.</i>	<i>Bushels.</i>		<i>Bushels.</i>
1883.....	1,617,000,000	587,000,000	36.3	1,428,000,000
1884.....	1,551,000,000	512,000,000	33	1,439,000,000
1885.....	1,795,000,000	675,000,000	37.6	1,120,000,000
1886.....	1,936,000,000	773,000,000	39.9	1,163,000,000
1887.....	1,665,000,000	603,000,000	36.2	1,062,000,000
1888.....	1,459,000,000	508,000,000	34.9	948,000,000
1889.....	1,988,000,000	787,000,000	39.6	1,201,000,000
1890.....	2,113,000,000	976,000,000	45.9	1,137,000,000
1891.....	1,490,000,000	542,000,000	36.4	948,000,000

The States of the Western group have consumed 66.2 per cent of the product, instead of 53.7 per cent last March. After the small crops of 1883 and 1887 the proportion consumed was slightly larger than the present percentage. The quantity reported as consumed or distributed is much less than that returned a year ago, though it is a little more than the consumption three years ago, after the year of drought. A decline of 171,000,000 bushels in the amount handled in the first six months after harvest in the Western group of States is a sharp reminder of scarcity, economy in use, and high price of maize, which has sent to market millions of half-fattened swine, causing a temporary abundance and low price of pork, which must be followed by a sharp advance after the present plethora of pork is reduced. For the same reason the country has been feeding upon Texas and plains beef, grass fed, and the average quality of high-grade beef, corn fed, has suffered depreciation.

The consumption of the States of the Middle group is more uniform, and the proportion advanced but little in comparison with that of the previous crop. The Eastern States and Pacific coast States have so little production that the figures are of little practical consequence. Next to the Western group the Southern States are most important. Their consumption is always a relatively small percentage of the crop at this date. This year it is 56.0 per cent; last year, 53.5 per cent. The proportions are as follows:

Sections.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.
	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>	<i>P. ct.</i>
New England.....	70.2	66.2	62.9	61.6	63.3	65.4	66.5	68.4	67.7
Middle.....	62.6	68.2	63.4	59.1	61.8	65.6	62.6	59.9	62.3
Southern.....	56.5	58.0	54.6	54.6	58.1	55.5	55.7	52.5	54.9
Western.....	66.2	69.3	63.3	61.6	65.6	69.6	61.4	53.7	66.2
Pacific.....	74.6	70.7	66.4	68.4	70.5	78.3	75.1	71.4	73.7
Nevada, Colorado, and Territories.....	65.0	70.2	65.5	63.3	67.0	59.5	68.5	70.9	74.1

Turning from distribution to stocks on hand, we have about 428,000,000 bushels less than last March, a reduction of 44 per cent. The Western and Southern groups have 19 out of every 20 bushels of these stocks. The table is as follows:

Sections.	1888.		1889.		1890.		1891.	
	<i>Bushels.</i>	<i>P. ct.</i>	<i>Bushels.</i>	<i>P. ct.</i>	<i>Bushels.</i>	<i>P. ct.</i>	<i>Bushels.</i>	<i>P. ct.</i>
New England.....	3,177,620	34.6	2,304,580	33.5	2,873,780	33.6	2,700,930	32.8
Middle.....	28,595,170	34.4	31,759,040	38.0	30,603,350	40.1	26,586,520	37.7
Southern.....	187,823,040	44.5	182,670,430	44.3	199,408,040	46.5	164,036,740	44.0
Western.....	278,119,160	30.4	562,063,360	38.6	730,448,050	46.3	343,849,430	33.8
Pacific.....	1,061,960	21.7	1,112,310	24.9	1,321,250	28.6	1,212,870	26.5
Nevada, Colorado, and Territories.....	9,494,560	40.5	6,672,340	31.5	5,284,010	30.0	3,797,760	25.9
Total.....	508,273,510	34.9	787,482,060	39.6	969,938,480	45.9	542,173,250	36.4

In considering the question of commercial supply it is not necessary to regard the stocks of any States except seven, known as the corn-surplus States, as little is ever drawn into the channels of general trade from any other states. A marked peculiarity of the following statement is the scarcity of corn in Kansas and Nebraska, the region in which we hear so much of its use as fuel. The record of 290,000,000 bushels in the surplus States, where there were 667,000,000 last year, indicates the scarcity and explains the necessity of high prices. Nearly a third is in Iowa, and most of the remainder in Illinois and Missouri.

States.	1888.		1889.		1890.		1891.	
	<i>Bushels.</i>	<i>P. ct.</i>	<i>Bushels.</i>	<i>P. ct.</i>	<i>Bushels.</i>	<i>P. ct.</i>	<i>Bushels.</i>	<i>P. ct.</i>
Ohio.....	22,139,100	30	38,137,380	41	37,360,260	42	19,104,040	29
Indiana.....	19,992,000	28	50,191,200	40	47,995,200	45	24,927,000	28
Illinois.....	43,734,800	31	114,004,600	41	124,380,000	48	63,731,040	34
Iowa.....	62,390,680	34	114,075,120	41	167,983,680	48	86,002,430	37
Missouri.....	39,465,720	28	72,929,880	36	102,855,270	47	63,124,200	36
Kansas.....	18,371,280	24	52,201,380	33	117,848,920	49	15,475,820	28
Nebraska.....	34,465,500	37	57,686,800	40	68,789,780	46	17,699,200	32
Total.....	240,559,080	30.8	499,226,360	39.0	667,213,110	47.2	290,063,830	33.7

Though only about one-half of the reserve is in these States, scarcely any of the other one-half is commercially available. The failure in Ohio and Indiana and in the Missouri Valley limits to an unusually narrow district the search for commercial maize supplies.

DISTRIBUTION.

The estimated distribution beyond county lines is necessarily small. The reduction in exports is so far this year more than 50 per cent; the reduction in Eastern use of Western corn is very heavy, and shipments to adjoining counties and States for feeding purposes very much curtailed, so that the estimated quantity intended for outside consumption is only 188,000,000 bushels instead of 384,000,000 bushels reported last year. The statement in detail of crop stocks on hand and local consumption is thus stated:

States and Territories.	Crop of 1890.		Stock on hand March 1, 1891.		Consumed in county where grown.		Shipped out of county where grown.	
	<i>Bushels.</i>		<i>Bushels.</i>	<i>P. ct.</i>	<i>Bushels.</i>	<i>P. ct.</i>	<i>Bushels.</i>	<i>P. ct.</i>
Maine.....	1,008,000		302,400	30	907,920	99	10,080	1
New Hampshire.....	1,258,000		365,110	29	1,246,410	99	12,590	1
Vermont.....	1,839,000		662,010	36	1,820,610	99	18,390	1
Massachusetts.....	1,868,000		579,080	31	1,868,000	100		
Rhode Island.....	402,000		136,680	34	389,910	97	12,060	3
Connecticut.....	2,014,000		664,620	33	2,014,000	100		
New York.....	17,101,000		5,472,320	32	16,923,990	99	171,010	1
New Jersey.....	11,185,090		4,697,700	42	10,066,500	90	1,118,590	10
Pennsylvania.....	38,043,000		14,456,340	38	34,238,700	90	3,804,300	10
Delaware.....	4,128,000		1,940,160	47	3,096,000	75	1,032,000	25
Maryland.....	16,333,000		6,859,800	42	11,923,090	73	4,409,910	27

States and Territories.	Crop of 1890.		Stock on hand March 1, 1891.		Consumed in county where grown.		Shipped out of county where grown.	
	Bushels.	P. ct.	Bushels.	P. ct.	Bushels.	P. ct.	Bushels.	P. ct.
Virginia.....	36,922,000	47	17,353,340	47	33,229,896	90	3,692,200	19
North Carolina.....	36,264,000	48	17,406,720	48	34,088,160	94	2,175,840	6
South Carolina.....	16,078,000	46	7,395,880	46	*15,434,880	96	643,120	4
Georgia.....	31,306,000	47	14,713,820	47	30,366,820	97	909,180	1
Florida.....	4,570,000	45	2,036,500	45	4,478,000	98	91,400	0
Alabama.....	25,590,000	46	11,679,400	46	24,374,400	96	1,615,600	4
Mississippi.....	24,396,000	45	10,278,200	45	23,908,080	98	487,920	1
Louisiana.....	16,979,000	44	7,470,760	44	16,639,420	98	339,580	1
Texas.....	63,802,000	37	23,606,740	37	62,525,960	98	1,276,040	1
Arkansas.....	35,443,000	40	13,377,200	40	32,774,140	98	669,860	1
Tennessee.....	67,692,000	46	31,138,320	46	62,276,640	92	5,415,360	8
West Virginia.....	13,435,000	35	4,702,250	35	12,897,000	96	557,400	4
Kentucky.....	63,645,000	38	24,185,100	38	56,007,000	88	7,637,400	11
Ohio.....	65,876,000	29	19,104,040	29	58,629,640	89	7,246,360	11
Michigan.....	26,580,000	27	7,176,000	27	25,516,800	96	1,083,200	4
Indiana.....	89,025,000	28	24,927,000	28	76,561,590	86	12,463,500	14
Illinois.....	187,446,000	34	63,731,640	34	144,389,420	77	43,112,580	23
Wisconsin.....	35,061,000	33	10,910,130	33	31,738,560	96	1,322,440	4
Minnesota.....	21,286,000	32	6,811,520	32	20,221,700	95	1,064,300	5
Iowa.....	232,439,000	37	86,002,430	37	185,951,200	80	46,487,800	20
Missouri.....	175,345,000	36	63,124,200	36	152,550,500	87	22,794,850	11
Kansas.....	55,209,000	28	15,475,320	28	48,084,630	87	7,184,970	11
Nebraska.....	55,310,000	32	17,690,200	32	47,015,500	85	8,296,500	13
California.....	4,396,000	27	1,186,920	27	3,824,820	87	571,480	13
Oregon.....	173,000	15	25,950	15	167,810	97	5,190	0
Colorado.....	767,000	30	230,100	30	751,860	98	15,340	2
The Dakotas.....	12,030,000	26	3,127,800	26	11,548,800	96	481,200	4
New Mexico.....	1,126,000	22	247,720	22	1,092,220	97	33,780	3
Utah.....	739,000	26	192,140	26	702,050	95	36,950	0
Total.....	1,489,970,000	36.4	542,173,250	36.4	1,302,280,820	87.4	187,689,180	12.6

This distribution, as shown by sections, indicates an increase in the proportion of the crop consumed, with a decrease in actual quantity, in every group of States, as follows:

Sections.	1890.				1891.			
	Retained for county consumption.		Distribution beyond county lines.		Retained for county consumption.		Distribution beyond county lines.	
	Bushels.	P. ct.	Bushels.	P. ct.	Bushels.	P. ct.	Bushels.	P. ct.
New England.....	8,534,000	99.9	10,340	.1	8,356,880	99.4	53,120	.6
Middle.....	68,000,400	89.9	7,736,000	10.1	64,331,190	91.3	6,125,810	8.7
Southern.....	395,296,180	92.1	33,839,820	7.9	352,019,090	94.3	21,155,010	5.7
Western.....	1,235,466,460	78.4	341,121,540	21.6	859,665,700	84.4	159,211,360	15.6
Pacific.....	3,048,260	85.4	672,740	14.6	3,992,330	87.4	576,670	12.6
Nevada, Colorado, and Territories..	16,807,370	95.5	797,630	4.5	14,094,730	96.1	567,270	2.9
Total.....	1,728,713,330	81.8	384,178,670	18.2	1,302,280,820	87.4	187,689,180	12.6

PROPORTION MERCHANTABLE.

The crop of 1890 was not quite up to the average in the proportion of sound corn, being surpassed by five of eight successive crops, a little better than that of 1885, and much better than that of 1883, which was severely injured by frost. The injury was mostly from excessive moisture on the Atlantic coast, and in the interior valleys from drought.

Years.	Merchantable.		Unmerchantable.	
	Bushels.	P. ct.	Bushels.	P. ct.
1883.....	935,926,541	60	615,140,354	40
1884.....	1,593,332,101	89	202,196,331	11
1885.....	1,589,012,860	78	353,163,140	22
1886.....	1,438,446,830	86	226,994,170	14
1887.....	1,222,166,360	84	233,904,640	16
1888.....	1,637,405,930	82.4	350,384,070	17.6
1889.....	1,810,557,850	85.7	302,334,150	14.3
1890.....	1,183,794,720	79.5	306,175,280	26.5

Percentage of merchantable.

States and Territories.	Merchantable.				Unmerchantable.			
	Bushels.	Per cent.	Price per bushel.	Value.	Bushels.	Per cent.	Price per bushel.	Value.
Maine.....	806,400	80	\$0.80	\$645,120	201,600	20	\$0.40	\$80,640
New Hampshire.....	1,032,380	82	.78	805,256	226,620	18	.36	81,583
Vermont.....	1,452,810	79	.77	1,118,664	386,190	21	.37	142,890
Massachusetts.....	1,587,800	85	.76	1,206,728	280,200	15	.33	106,476
Rhode Island.....	341,700	85	.77	263,109	60,300	15	.39	23,517
Connecticut.....	1,611,200	80	.76	1,224,512	402,800	20	.38	153,064
New York.....	12,312,720	72	.68	8,372,650	4,788,280	28	.35	1,675,898
New Jersey.....	9,283,550	83	.70	6,498,485	1,901,450	17	.36	684,522
Pennsylvania.....	81,193,260	82	.66	53,588,872	6,847,740	18	.34	2,328,232
Delaware.....	3,426,240	83	.60	2,055,744	701,760	17	.35	245,616
Maryland.....	13,393,060	82	.60	8,035,836	2,939,940	18	.33	970,180
Virginia.....	29,908,820	81	.64	19,140,365	7,015,180	19	.35	2,455,313
North Carolina.....	29,011,200	80	.70	20,307,840	7,252,800	20	.36	2,611,008
South Carolina.....	12,701,620	79	.78	9,907,264	3,376,380	21	.37	1,249,261
Georgia.....	24,418,680	78	.79	19,290,757	6,887,320	22	.35	2,410,562
Florida.....	3,747,400	82	.80	2,997,920	822,600	18	.37	304,362
Alabama.....	20,312,000	80	.74	15,030,880	5,078,000	20	.36	1,828,080
Mississippi.....	19,028,880	78	.77	14,652,238	5,307,120	22	.38	2,039,506
Louisiana.....	13,583,200	80	.80	10,866,560	3,395,800	20	.40	1,358,320
Texas.....	47,851,500	75	.76	36,367,140	15,950,500	25	.40	6,380,200
Arkansas.....	24,078,960	72	.75	18,059,220	9,364,040	28	.40	3,745,616
Tennessee.....	46,030,560	68	.59	27,158,630	21,661,440	32	.32	6,931,669
West Virginia.....	9,941,900	74	.68	6,760,492	3,493,100	26	.38	1,327,371
Kentucky.....	48,376,200	76	.57	27,571,014	15,274,800	24	.32	4,887,938
Ohio.....	48,748,240	74	.58	28,273,979	17,127,700	26	.32	5,480,886
Michigan.....	19,137,600	72	.60	11,482,560	7,442,400	28	.31	2,307,143
Indiana.....	69,439,500	78	.55	38,191,725	19,585,500	22	.30	5,875,654
Illinois.....	159,329,100	85	.49	78,071,259	28,116,800	15	.33	9,278,570
Wisconsin.....	25,456,970	77	.49	12,473,915	7,604,030	23	.29	2,205,167
Minnesota.....	16,815,940	79	.47	7,903,492	4,470,060	21	.33	1,475,120
Iowa.....	197,575,150	85	.45	88,907,918	34,865,850	15	.32	11,157,072
Missouri.....	140,276,000	80	.47	65,929,720	35,069,000	20	.29	10,170,010
Kansas.....	39,240,900	71	.49	19,228,085	16,028,010	29	.32	5,128,963
Nebraska.....	46,400,400	84	.48	22,300,992	8,849,600	16	.30	2,654,880
California.....	3,956,400	90	.75	2,967,300	439,600	10	.40	175,840
Oregon.....	145,320	84	.73	106,084	27,680	16	.37	10,242
Colorado.....	613,600	80	.77	472,472	153,400	20	.32	49,088
The Dakotas.....	9,624,000	80	.47	4,523,280	2,406,000	20	.31	745,800
New Mexico.....	923,320	82	.75	692,490	202,680	18	.38	77,018
Utah.....	628,150	85	.70	439,705	110,850	15	.38	42,123
Total.....	1,183,794,720	79.5	.558	660,889,672	306,175,280	20.5	.329	100,855,460

PRICES.

The following table shows the course of farm prices for fifteen years, and the wide local variations caused by varying supply and distance from markets:

States.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>
Kentucky.....	32	40	37	38	70	52	42	43	35	34	53	34	34	49
Ohio.....	40	33	39	41	61	62	47	41	32	35	48	35	31	51
Michigan.....	39	38	45	46	63	59	52	40	34	38	48	42	37	55
Indiana.....	34	27	34	40	60	48	41	34	29	32	45	31	27	47
Illinois.....	29	25	31	36	58	47	40	31	28	31	41	29	24	43
Wisconsin.....	33	29	39	39	54	53	48	34	34	37	42	36	29	45
Minnesota.....	38	29	27	36	53	45	43	33	32	34	37	32	27	42
Iowa.....	25	16	24	26	44	38	32	23	24	30	35	24	19	41
Missouri.....	27	26	25	36	65	39	35	26	25	31	37	30	23	44
Kansas.....	21	19	27	29	58	37	26	22	24	27	37	26	18	51
Nebraska.....	18	16	21	25	39	33	24	18	19	20	30	22	17	48
The Dakotas.....	.....	.....	.....	.....	.....	51	45	30	28	37	35	33	33	50
United States.....	35.8	31.8	37.5	39.6	63.6	48.5	42.4	35.7	32.8	36.0	44.4	34.1	28.3	50.6

The export prices, or those of the seaports for corn exported, will show the difference between values on the farms and on the Atlantic

coast, which is made up of transportation charges, commissions, and dealers' profits.

Years ending June 30—	Price.	Years ending June 30—	Price.
	<i>Cents.</i>		<i>Cents.</i>
1878.....	56.2	1885.....	54.9
1879.....	47.1	1886.....	48.2
1880.....	54.3	1887.....	43.7
1881.....	55.2	1888.....	50.1
1882.....	60.6	1889.....	47.4
1883.....	68.4	1890.....	61.5
1884.....	61.1		

WHEAT.

The wheat from the crop of 1890 remaining in the hands of growers March 1, 1891, is less by 15 per cent than the average of the preceding ten years and less by 33 per cent than the reserve following the large crop of 1884. It has been lower only in two years since 1880, and even then by a small margin. The reserves have been heavily drawn upon, and are necessarily very low. The fact of a difference of 71,000,000 bushels in the March invisible stocks, as reported annually to this Department and verified remarkably in subsequent distribution, should teach a wholesome lesson of the great capacity of farmers' granaries in the absorption of a surplus of production. The truth unquestionably is that there is a strong tendency in the public mind to underestimate the reserves in the hands of farmers. Dealers in grain, bona fide or by the fiction of futures, who see daily the visible stocks paraded, which are at any time a very small proportion of the annual production, come to regard with indifference and unbelief the existence of stocks in the hands of growers. They live by sight entirely and have little faith in anything they do not see, and therefore gravely miscalculate the possibilities of reserves that remain in the granaries of farmers. The surplus of two or three years, held in remote regions not easy of access, in Russia, and India, and elsewhere, have been collected through improved commercial facilities and poured into the centers of trade, to the surprise of both consumers and producers, to the equalization of prices, and the maintaining of relatively low rates throughout the world.

The following statement gives the March reserves of each crop since that of 1879:

Years.	Crops of previous years.	In farmers' hands March 1.			Years.	Crops of previous years.	In farmers' hands March 1.		
	<i>Bushels.</i>	<i>Bushels.</i>	<i>P. ct.</i>			<i>Bushels.</i>	<i>Bushels.</i>	<i>P. ct.</i>	
1891.....	399,262,000	112,000,000	28.2	1885.....	512,765,000	169,000,000	33		
1890.....	490,560,000	156,000,000	31.9	1884.....	421,086,100	119,000,000	28.3		
1889.....	415,868,000	112,000,000	26.9	1883.....	504,185,470	143,000,000	28.4		
1888.....	456,329,000	132,000,000	28.9	1882.....	383,280,000	88,000,000	23.6		
1887.....	457,218,000	122,000,000	26.7	1881.....	498,549,868	145,000,000	29.1		
1886.....	357,112,000	107,000,000	30.1						

The following statement of supply and distribution is made on the same basis of rate of consumption per head that has been used for a dozen years, accounting with remarkable closeness for the estimate of production, which is always made at least six months in advance of any possible verification by the fact of the commercial movement of the crop year:

	Distribution.	Supply.
	<i>Bushels.</i>	<i>Bushels.</i>
Visible supply March 1, 1890		29,000,000
In farmers' hands, 1890		150,000,000
Crop of 1890 (round numbers)		300,000,000
Consumption, twelve months	290,000,000	
Seed, spring and fall	53,000,000	
Exported, March 1, 1890, to March 1, 1891	98,000,000	
Visible supply March 1, 1891	23,000,000	
In farmers' hands March 1, 1891	112,000,000	
Total	585,000,000	584,000,000

These figures of distribution and supply vary only by a million bushels. The discrepancy might be 10,000,000 without necessarily impairing the reliability of the data, the largest element being consumption, as there might easily be such a difference, which would be less than two weeks' consumption in the stocks of flour which are in the hands of wholesale and retail dealers and in hotels and private families—the variable stocks on the way from mill to mouth.

As to the item of 112,000,000, the reserve of the farms, which fits so well the gap in the record of distribution of last year's supply, it is the direct result of a calculation of the percentages reported by our correspondents, which come to us in duplicate, from two sets of correspondents, with some slight discrepancies, of course, which are harmonized, each case by itself, with no means of knowing what the aggregate will show until the work is done. The result this year, as in former years, has been so consistent with the other facts of supply and distribution as to be a surprise to those engaged in the consolidation, and to furnish irrefutable evidence of the substantial accuracy of the result. The figures of the balance sheet show such agreement that some innocents of the commercial boards have in great simplicity assumed that the reserves were obtained by figuring up the other items of distribution and deducting their sum from the aggregate of supply. This would be a very easy method, quite in accord with the superficial requirements of amateur crop reporting.

To show how estimated production has agreed with distribution in the past, counting actual exports, seed, and consumption on the basis of 4½ bushels per capita, a rate fixed after thorough investigation twelve years ago, the following table is given:

Years.	Production.	For food.	For seed.	Exportation.	Total distributed.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1880	498,549,848	242,086,655	50,563,530	186,321,514	484,971,699
1881	383,289,090	235,249,812	55,215,573	121,892,389	412,357,774
1882	564,185,470	255,500,000	32,770,312	147,811,316	456,081,628
1883	421,086,160	259,500,000	54,683,389	111,534,182	425,717,571
1884	512,765,000	265,000,000	55,268,239	132,570,367	452,836,605
1885	357,112,000	271,000,000	51,474,906	94,565,794	417,040,700
1886	457,218,000	277,000,000	51,528,658	153,804,970	482,333,628
1887	456,329,000	283,000,000	53,009,982	119,625,344	455,635,326
1888	415,808,000	288,000,000	54,012,702	88,600,743	430,613,445
1889	490,560,000	294,000,000	53,973,000	109,430,467	457,403,467
Total	4,496,953,588	2,670,336,467	538,498,291	1,266,157,086	4,474,991,844
Average	449,695,359	267,033,647	53,849,829	126,615,709	447,499,184

The estimated production of ten years averages 449,695,359 bushels per annum; the distribution, including consumption, seed, and exports, averages 447,499,184 bushels, leaving unaccounted for during the entire period of ten years an average of only 2,196,175 bushels per annum.

This difference is scarcely enough to cover the loss by fire and sinking in the lakes. The consumption is on the basis of $4\frac{1}{2}$ bushels per head. In most of the Northern States it is about 5 bushels per head, but in some of the cotton States, with a large colored population, the consumption is from 3 to 4 bushels.

PRICES.

Average farm price of wheat for the years 1877-'90.

States.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Kentucky...	\$0.99	\$0.76	\$1.08	\$0.93	\$1.31	\$0.90	\$0.95	\$0.74	\$0.95	\$0.72	\$0.73	\$0.90	\$0.72	\$0.92
Ohio.....	1.24	.80	1.20	1.02	1.29	.95	.99	.75	.91	.74	.75	.97	.76	.91
Michigan...	1.22	.85	1.17	.97	1.25	.90	.96	.74	.84	.73	.74	.98	.74	.90
Indiana.....	1.13	.81	1.17	.99	1.27	.90	.95	.67	.86	.70	.72	.94	.71	.88
Illinois.....	1.04	.75	1.07	.95	1.22	.86	.92	.63	.81	.69	.70	.93	.70	.87
Wisconsin...	.93	.67	1.04	1.00	1.19	.90	.83	.60	.76	.68	.64	.96	.70	.83
Minnesota...	.91	.51	.94	.87	1.06	.82	.80	.50	.70	.61	.59	.92	.71	.81
Iowa.....	.87	.50	.92	.82	1.06	.70	.80	.55	.67	.60	.61	.85	.63	.80
Missouri.....	1.09	.67	1.01	.89	1.19	.85	.88	.62	.77	.63	.62	.88	.64	.82
Kansas.....	.82	.59	.89	.70	1.05	.67	.78	.45	.65	.56	.61	.88	.56	.77
Nebraska.....	.83	.49	.84	.73	.97	.67	.70	.42	.57	.47	.53	.83	.52	.74
The Dakotas...	.....	.....	.....	.....	.....	.80	.72	.46	.63	.52	.52	.91	.60	.79
United States	1.082	.777	1.108	.951	1.192	.882	.911	.645	.771	.687	.681	.926	.692	.83

Average export price of wheat.

Years.	Average price.	Years.	Average price.
1874-'75.....	\$1.12	1882-'83.....	\$1.11
1875-'76.....	1.24	1883-'84.....	1.07
1876-'77.....	1.17	1884-'85.....	.890
1877-'78.....	1.34	1885-'86.....	.830
1878-'79.....	1.07	1886-'87.....	.890
1879-'80.....	1.24	1887-'88.....	.853
1880-'81.....	1.11	1888-'89.....	.807
1881-'82.....	1.19	1889-'90.....	.832

WEIGHT PER BUSHEL.

The weight per bushel is determined by an investigation accomplished through the aid of our correspondents, the returns of State agents, the statements of actual weights of grain purchased by millers, elevator men, and all available sources of information, including the records of inspections in wheat markets. The weight of the crops of eight years past is thus stated:

Years.	Weight per bushel.	Measured bushels.	Weight in pounds.	Bushels of 60 pounds.
	<i>Pounds.</i>			
1883.....	56.9	420,154,500	23,906,128,850	398,435,421
1884.....	58.3	512,763,800	29,912,751,800	496,545,861
1885.....	57.0	357,112,000	20,369,787,000	339,496,441
1886.....	58.4	457,218,000	26,686,632,000	444,777,202
1887.....	58.5	456,329,000	26,702,852,500	445,047,538
1888.....	56.5	415,868,000	23,485,060,800	391,417,782
1889.....	57.7	490,560,000	28,287,039,000	471,400,000
1890.....	57.2	399,202,000	22,854,954,200	380,915,903

PERMANENCY OF AGRICULTURAL PRODUCTION.

The increase of our population, and the necessary decline in proportion of agricultural producers to consumers, tends to enlarge the proportion of products consumed at home, and must continue to do so, and consequently to increase the prices of products and presumably the profits of agriculture. This tendency, which is indisputable and inevitable, is a source of consolation in temporary depression and of hope for a cheerful future. While taking this cheerful outlook ahead, aided by the logic of current statistics, there is no need of going to the other extreme, and prophesying exhaustion of fertility, inability to support population, and general decadence and paralysis of agricultural production. The crude practice of two-thirds of our farmers should be reformed; the low yields which are a disgrace to our agriculture should be raised by advanced methods and the infusion of science and sense in practice. To claim that this low rate of production must continue is to encourage apathy and to repress enterprise. To say that the millions of acres of fertile "wastes" in the South and the mountain regions shall be forever useless, and that the half-occupied and carelessly cultivated farms of the country shall remain in a condition in which it is scarcely possible to produce enough to pay the cost of the shiftless labor expended on them, is to be unworthy of the position of a rural teacher in this age of discovery and progress. The sloth should not be the emblem of the agriculture of to-day; rather the busy bee, the alert and early cock of the morning walk, or the sure-footed maker of the 2:10 pace.

As a whole, there has been no overproduction in this country; as to cotton, wheat, and some other products, under the baneful influence of the single-crop idea, there has been, and it has been the main factor of depression of prices. Cotton to-day is suffering from a depression in value from no other source whatever. At the same time we demand and use products worth two or three hundred million dollars which should be produced here. This diversity would boom agriculture and turn depression into high prosperity.

We should seek foreign markets for any possible surplus; and still we should disabuse ourselves of the insane idea that foreign countries can sit idle by their fertile fields and procure their food from the antipodes. The cry of starvation comes to us from an agricultural district in Europe for the first time in a generation, and 50,000,000 bushels of grain have been exported from the same country this season, while its Government claims that there is enough left to last until the next crop. Whatever starvation may come, it will be seen that no importation of breadstuffs, or little, if any, will follow. Starving people can not buy grain, and most of the countries of Europe must continue to produce it or starve.

Many of our agricultural writers fail to analyze properly the available statistics of the day, and are led into false views by the failure, or make unreasonable or erroneous conclusions from incomplete or inaccurate data. Statistical data are edge tools in the hands of the inexpert. There are statistical fallacies promulgated, in many directions and from many sources, which should be corrected, in the interest of the public good and the profit of agriculture. A few of these will be considered. One of these is ignorance as to conditions of agricultural production in Europe.

EUROPE NEARLY SELF-SUPPORTING.

Europe has four times as many people as the United States, and very few of the countries represented by this eastern continent fail to produce nearly or quite enough for their own subsistence. All eastern Europe has an agricultural surplus; and Italy's exports equal her imports. Even the Netherlands, with only $2\frac{1}{2}$ acres to each inhabitant, require only a few million of dollars' worth of agricultural imports in excess of agricultural exports. France requires from foreign sources only about 7 per cent of her consumption for a population nine times as dense as ours. Insular and factory-studded Great Britain feeds one-half of her people from her soil, through a labor of one-eighth of her population, and her game preserves and pleasure grounds are enough to feed the other half if utilized for agricultural production.

It would seem to be an absurdity to claim a necessity of four times as much area to feed one person in this country as it requires in Europe, with whatever allowance may be necessary for more liberal dietary. The contention becomes the more unreasonable in view of the fact that half of the area of Europe could easily double its production under more general and higher cultivation.

OUR RESOURCES NOT EXHAUSTED.

Is our public land all taken up? A considerable part of the arid area is not even surveyed. With the utilization of all the possibilities of irrigation, tens of millions of acres will be opened for cultivation. In lands, as in forest products, the specialist has for years prophesied utter and almost immediate exhaustion, yet lands are still annually patented by millions of acres, and forest products are growing while the reverberations of the ax are dying away. It is not denied that the public-land area is decreasing rapidly or that the heavy timber of the forest is melting gradually away, but not so rapidly in either case as sensational writers would intimate.

Some evidently assume that all available farming lands are already occupied. By no means, even in the original States. Little more than a third of Maine is in farms, and colonization of the most fertile unoccupied area of that State is in progress. From a sixth to a fifth of the land in the South is utilized for production, and millions of acres of its richest and deepest soils are as yet untouched. One-tenth of the area of Florida is fifteen times the entire breadth of the sugar cane in the United States in 1880, situated several degrees of latitude south of existing plantations, requiring only a system of drainage to become the best cane lands of the United States.

The land actually in farms is only partially utilized in cultivation in every State east of the Mississippi, and the productiveness of cultivated lands is far below its possibilities. As a rule, outside of the prairies, the poorest lands were first in cultivation, in violence to the dictum established by town-residing economists of the old school. Our richest lands are the most heavily wooded, the most difficult and expensive to clear, and swamp lands requiring combination and capital to drain. There are lands now commanding an annual rental higher than the present average value of our farm lands, west as well as east of the Alleghenies, which were less than a generation ago too nearly valueless to find a purchaser willing to pay nominal taxes on them. Millions of acres of the richest and intrinsically most valuable lands of the Atlantic coast, awaiting perfectly feasible drainage, are yet to be brought

into cultivation, while the unoccupied lands of the lower Mississippi are scarcely less extensive. In fact, the entire idea of nearing exhaustion of productive lands is based on the assumption of necessary continuance of primitive methods in agriculture, the cheapest and most superficial culture, and stagnation of all rural progress.

THE SURPLUS NOT UNLIMITED.

While one class is prophesying decline in relative supply as population increases, another goes to the opposite extreme, and assumes the probability of overproduction, the ability to "feed the nations," and practically unlimited production. Such views often originate in lack of information and excess either of patriotic or partisan zeal. While there has been in productive years positive overproduction of certain crops, from adhesion to the agricultural traditions of the fathers, preventing diversification necessary to supply old wants not met under primitive agricultural conditions and the new wants of advancing civilization, there is now underproduction or nonproduction which has a very repressive effect on agricultural activities, resulting in rural stagnation and depression.

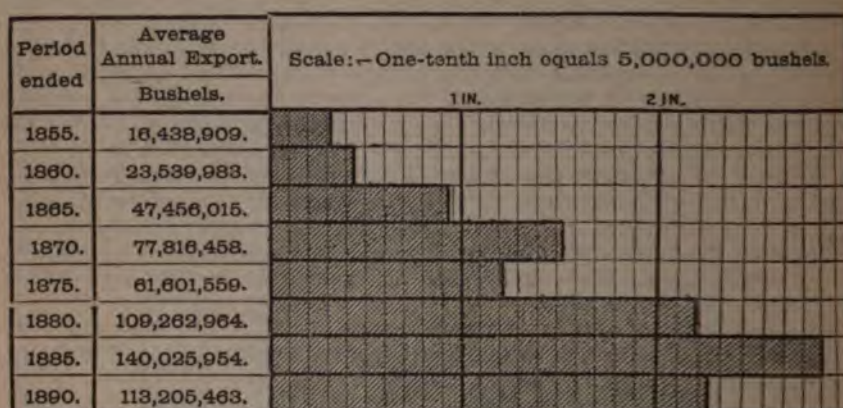
The March, 1891, report of the Department of Agriculture showed how small a proportion of the agricultural consumption of the European nations is represented by the net imports of each, several of them having a surplus, others a very small deficit, and only Great Britain and Belgium any large dependence on foreign agriculture. Not a dollar's worth of our usual surplus will be taken except to supply an imperative demand. Any overburdening of the market instantly reduces the price, whether in cotton or tobacco, wheat or corn. In the case of meats, there is opportunity for increase of sales, of opening of new markets, as the exportation of fresh meats was initiated less than fifteen years ago and is still susceptible of great extension. Foreigners do not buy of us for our advantage, but always for their own; from necessity rather than preference; for cash, and not for barter; some nations selling us five to ten times as much as they buy of us; others buying from us much more than they sell to us, simply because they need the goods and must have them. While no nation has such a surplus as ours, and none can expect to have in the near future, it should be understood that nine-tenths of our aggregate production is consumed at home, and that as population increases the tendency will be toward decrease of the *proportion* exported, even though the *quantity* should increase.

It would be possible, under the spur of necessity or of large profit, as when the wheat exports of the war period were doubled while the able-bodied yeomen of the West were far away upon tented fields, to increase the surplus. To find purchasers at a profit for such a rate of increase would now be a more difficult problem. Limitation of demand would lead to a reduction of price and destruction of profit.

Climatic influences cause unavoidable fluctuations, which are evened up in a series of years or in a group of countries in a single year. The areas of winter crops may be decimated and those of spring planting proportionately increased. If extraordinary demand arises it is promptly met, and will be in the future as it has been in the past, and land and labor will be abundant to meet it, even if the result should break the record of uniformity in rural progress.

THE WHEAT SURPLUS NOT IMMEDIATELY EXHAUSTIBLE.

False deductions from agricultural statistics come from partial knowledge of controlling conditions. A very common error of statistical writers, for example, is the assumption of a future rate of decline of wheat exports based upon the reduction since 1880. The status of these exports is shown in the following illustration in periods of five years:



Were the present fiscal year's exports complete, it would show, even if coupled with the small shipments of 1890-'91, a positive advance upon the average of the remarkable shipments of the quinquennial of 1885. It is probable, and nearly certain, that the exports of the present year will considerably exceed those of the largest previous annual exportation. The large exportation of the period, 1881-'85 was altogether exceptional, the accident of fluctuating production; for in three years in which exports reached their highest point, no less than 514,000,000 bushels went abroad, about as much as in the seven preceding years, and the cause was a partial failure of crops in western Europe. The Statistician at that time warned wheat-growers that this abnormal demand would not continue; that good crops in western Europe and reduction of demand would follow. The decline began at once; acreage in this country was reduced, and wheat-growers grumbled at unremunerative prices. Now, going to the other extreme, since the amount has fallen from 186,000,000 bushels in 1880-'81 to 89,000,000 bushels in 1888-'89, agricultural writers are prophesying speedy exhaustion of surplus and early demand for foreign wheat. This deduction is quite as unreasonable as the other. It is a question of price and profit, and not of land and labor.

NOR IS WHEAT-GROWING DECLINING IN EUROPE.

Another fallacy relative to cereal production is that it is declining perceptibly in Europe. There are annual fluctuations, but no material change. The following statement of the last five years includes the final official estimate of each European country which makes annual estimates, except as to 1890, in which case there are some preliminary estimates:

Wheat crop of Europe, by countries, from 1886 to 1890.

Countries.	1886.	1887.	1888.	1889.	1890.
<i>Austria-Hungary:</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Austria	44,644,090	52,351,733	51,843,452	38,376,705	44,059,942
Hungary	102,846,419	145,806,514	135,859,786	92,725,057	154,709,509
Belgium	17,000,782	19,894,859	14,876,130	19,573,075	19,573,075
Denmark	5,201,416	6,024,412	3,805,301	4,977,661	5,776,512
France	304,427,095	319,094,204	280,176,816	307,357,350	309,437,805
Germany	97,973,269	104,013,175	92,991,571	87,170,354	104,020,780
Great Britain and Ireland	65,285,353	78,567,593	76,760,671	78,190,962	78,389,210
Greece	4,937,250	5,000,000	4,823,750	5,000,000	12,378,240
Italy	113,422,020	119,509,368	104,247,503	102,992,122	131,433,426
Netherlands	5,238,025	6,889,450	4,256,250	5,675,000	6,189,120
Portugal	8,228,750	6,000,000	7,093,750	8,512,500	8,252,160
Roumania	23,629,063	61,000,000	51,075,000	44,784,853	63,954,240
Russia in Europe (exclusive of Poland and Finland)	163,455,273	278,697,917	295,711,493	178,483,452	213,081,826
Servia	4,525,813	5,000,000	9,000,000	5,000,000	10,315,200
Spain	85,988,973	95,000,000	75,866,831	75,622,213	75,530,734
Sweden and Norway	4,081,115	4,600,174	4,128,279	3,991,795	4,395,651
Switzerland	1,645,750	2,000,000	1,702,500	2,270,000	2,475,648
Turkey	41,143,750	42,000,000	42,562,500	39,725,000	37,134,720
Total	1,092,773,206	1,351,549,399	1,256,781,583	1,100,428,000	1,281,021,789

The average of these five years is 1,219,000,000 bushels, while that of the five preceding years gives no larger figures; and the investigation in 1873 by the European Statistical Commission produced a similar result. It should be remembered, however, that Poland, Finland, European Turkey, Bulgaria, Roumelia, and certain principalities having an area of more than 320,000 square miles are not included. There is reason to believe that the average production of wheat of these countries exceeds 25,000,000 bushels. The real average of wheat production in the last five years may be fairly stated, in round numbers, at 1,250,000,000 bushels.

THE INDIAN SCARE.

A commercial fallacy, based on current statistics, was generally prevalent a few years ago relative to India wheat. The building of a few railroad lines brought to the seacoast a surplus that had always existed in productive seasons, which was preserved in pits to tide over the possible requirements of seasons of scarcity. This opportunity for exportation, stimulated by the difference in Liverpool value of silver and gold, enlarged the normal area of about 26,000,000 acres in 1878 to 28,000,000 in 1884-'85, since which date there has been a general decline to lower figures than those accepted as the acreage before there was any exportation, those of 1889-'90 being less than 25,000,000.

In the report of the Statistician for November, 1887, the public was cautioned not to receive certain views of commercial writers which were extravagant and sensational, making India a veritable bugbear in the American wheat market. The idea, so improperly promulgated, of rapid increase of acreage, improvement of methods of cultivation, introduction of improved implements, threatening a monopoly of the supply of the European deficiency, was duly combatted. It was deprecated and positively denied in these pages. The palpable fact was insisted upon that such changes were improbable; that there was a dense population to feed, comparative scarcity of food products, and tenacious habits and prejudices of centuries, making sudden changes impossible; that "the natives still work for a few cents a day, plow with a stick, thrash in the primitive fashion, and market dirt and seeds of weeds with the grain," and that "there is scarcely a people on the face of the earth less likely

to change their industrial status suddenly." A prediction of declining area and exportation has been verified from official records, which show a decrease of more than 3,000,000 acres. The largest exportation was 41,558,765 bushels of domestic product in 1886-'87, and that of 1889-'90 only 25,764,123 bushels. The record is found in detail, by countries to which exported, in the March report (page 84). If recent official indications of the Indian Government are conclusive and final, very little wheat may be expected to go out of India from the harvest just completed.

CONCLUSIONS.

This country has not reached the limit of agricultural production. It has not even approached it. One-third of its area is either too dry or too wet for present cultivation, awaiting irrigation or drainage. Of the other two-thirds there is much not included in farms; its farm area is not all utilized, and the cultivated area may become far more productive.

Farm labor is not sufficiently effective; its distribution could be more harmonious and profitable. Prices of cereals have sometimes been reduced by oversupply. Cotton, with a product of 22,000,000 bales in three years, a quantity greater than the production of six years prior to 1860, begins to decline in price. At the same time there is a failure to produce the sugar required, though there is cane land sufficient for an ample supply and beet-sugar lands *ad libitum*, without mentioning the possibilities of sorghum. There might be tens of millions of dollars annually coined from various fibers, large extension of fruit-growing, and introduction of many economic plants to be made the basis of new industries. The material now produced for food consumption might be put in more attractive form for market and a large contribution levied upon the gastronomic and æsthetic tastes of consumers.

It is not true that the wheat of the world is declining. It is not difficult to prove the existence of 2,300,000,000 bushels as an average, and there is no prospect of decrease. Annual fluctuations, from climatic causes, will produce variation in price, which the distribution of harvests of different climates through the year and increase of international transportation facilities will help to equalize. The United States will continue to produce a surplus for export, until the wheat culture of the plains shall have given place to more varied and profitable culture, and increasing numbers of nonagricultural population shall require for bread the entire crop.

It is proper to say that the tendency is towards a better distribution of crops and to higher prices and better profits. The proportion of agricultural labor will decrease, nonagricultural will increase, agricultural production will be more varied, rural intelligence and skill will advance, and the farmer be in better position to demand and secure an equitable share in the net proceeds of national industries.

OFFICIAL RETURNS OF RUSSIAN CEREALS.

GRADUAL DEVELOPMENT OF CROP STATISTICS.

The present statistical system of crop reports of Russia was put into practice first in 1883. An official statement of the growth of this system states that in 1865 the only information concerning the breadth and product of cereals was the result of a tentative and imperfect collection of statistics of winter and spring grains and potatoes by the

commissioners of the national supply of provisions, which was worked up by the central statistical committee and intended to be issued as a first chronicle (*vremennik*). It attempted to give for a five years' period the product of wheat and rye together (winter grain), and spring wheat, oats, millet, etc., as spring grains, placing together cereals used as food for man with those used for feed for farm animals mainly. This is referred to as "a gross fault, which has made the statistical data about the crops almost useless for any consideration or deductions." These appeared, under careful elaboration and critical examination, so imperfect that the statistical committee did not decide to publish them. According to these data some of the most fertile provinces of Russia, as Pedolsk and others, were not in a condition to support their own population, while considerable exports of grain appeared in commercial records. The only practical result of their effort was a further investigation by the committee of improved methods of collecting statistics from 1866 to 1868, revealing the entire impracticability of the methods before employed.

Owing to the ignorance of a majority of the producers, the sending of blanks to be filled up was not practicable, and there was not time enough for the police functionaries to find the individual producers and ascertain the facts and write them down. The committee came to the conclusion (previously expressed by the director, Mr. P. P. Semenov) that the only available means of obtaining an idea of the crops of each year would be through the collection of facts concerning a certain number of representative farms and the fixing of an average rate of production, which should afterwards be applied to the aggregate of units of area, "desiatines," a desiatine being equivalent to 2.6997 acres of our measure. Another difficulty appeared: there was a complete lack of information regarding land-tax statistics of breadth of land under separate cultivation. An imperial commission to perfect such registration was found to be an essential preliminary, which could not, however, be put into immediate operation.

Thus the efforts of the central statistical committee were balked until 1870, when a further attempt was made to ascertain the area and product of crops, and in 1875 a publication was made of such statistics of 1870 and 1872. In the preface of this "chronicle" the director expresses again, and at this time still more emphatically, his opinion that success could not be realized until an official registration of the distribution of lands had been made. Then followed a general statistical investigation of the condition of land-tax property in Russia, which was authorized in 1876 by the minister of the interior, and in 1877 was published the first general inventory of such property, with a determination of the area of arable lands. At the conclusion of this elaboration it was proposed, by more complete investigation, to gather exact information relative to the arable lands under each separate crop; but this feature was not included in the inquiry of 1877, for fear of retarding the progress of the investigation by increasing the number of questions.

The increasing interest in the subject induced the minister of the interior to take further steps toward a more speedy gathering of information regarding seeding and harvest, and a special temporary commission was formed in 1880. At this point the official history of progress says:

Judging from the records which had been brought to the commission by the president of the statistical council, the commission was fully persuaded of what the central statistical commission had all the time endeavored to show since 1866, namely, the unsatisfactory results of existing methods of gathering information about sowing

and crops and the utter impossibility of collecting such information by questioning each producer of breadstuffs. A more comprehensive scheme was elaborated, with broader basis of inquiry, and blanks were sent in the latter part of 1880, through the provincial statistical committees, twelve in each district, six to proprietors and six to peasants. The distribution had to be completed not later than the 1st of September of each year, filled and returned to the district authorities, and delivered to the provincial committee by the 20th of September, to be sent to the central statistical committee by the 1st of October. These were collected by January 5, 1881; there were 60,000 sheets, which were revised and tabulated by the 15th. The effort was deemed successful, but the commission decided not to publish the results, first, for want of available means for printing, and, second, because only a part of the data showing the distribution of crop areas was as yet available. This was not obtained till 1883.

Other official agencies had also been experimenting on the problem of crop determination. The department of agriculture and rural economy had for years worked for its solution, and had published statistical maps and other works relating to the rural economy of Russia, including the production of breadstuffs in Russia for the five years' period from 1870 to 1874, published in 1880. In this work the "deficiencies and inaccuracies of fundamental data" were acknowledged and deplored. This department, "fully recognizing the importance of establishment of economic statistics upon more solid principles," decided "to apply the new method of gathering economic statistical information which serves as the basis of rural economic statistics in the United States of North America, and which has been fully justified in practice, as is evidenced by the detailed monthly and yearly reports of the Washington Department of Agriculture, which seasonably brings to the notice of the country the data which are indispensable to the Government and to individuals interested in the production, consumption, distribution, and exchange of products of rural economy." The statement explains this method and shows by what agencies it should be applied in Russian practice. Returns were to be made at three dates: For the spring period, June 1; for the summer term, August 15; for the autumnal period, October 1. The effort met the sympathy of the farmers. The number of correspondents ran from 800 in 1881 to 2,200 in 1883. The condition of the growing crops was reported in the earlier returns, and in the third the local estimates of the rate of production per desiatine. These returns also include data relating to the distribution, exchange, and utilization of farm products, thus further following the methods in use in the statistical work of this department.

Another branch of the public service, the statistical division of the ministry of public works, makes investigation concerning the distribution of grain, exportation, prices, etc.

The Emperor in 1882 authorized the establishment of a statistical conference to utilize and harmonize the various sources of statistical information in relation to crops and supply of provisions in the Empire. The presidency of the conference was given to the director of the department of agriculture and rural economy and members were appointed from various departments and the ministries of the interior, imperial domains, roads, and communications. This conference directed the forwarding of returns of crop conditions on the 1st of June, July, and August, with two later returns of results. Some delay occurred in obtaining an appropriation to continue the work, which was granted in April, 1883. The schedules were prepared by the central statistical committee and secretary of the statistical division of the department of agriculture, and approved by the conference. The elaboration of the data obtained was not finished until January, 1884, and the printing was not commenced until the 18th day of December,

despite the fact that seventy-eight persons were specially employed to take part in the work.

This was declared to be the first experiment for the elaboration of this kind of data, with concurrent participation of several institutions, as it was the first authentic and approximately reliable report of the seeding and product of Russian cereals. It was acknowledged officially not to be free from defects, and coöperation for improvement was especially called for.

The difficulties encountered in this twenty years of strenuous and continuous effort to devise a practicable method of obtaining reliable crop statistics under existing social and economic conditions, and to test them by experiments until reasonable results were obtained, no one can appreciate who has not had experience in similar work. The labors by which the initiation of this system were accomplished, patient and untiring as they were, are worthy of all praise, and should lead to higher results and greater accuracy.

This synopsis of an official history of the evolution of Russian crop reporting shows how unreliable is the guesswork, assumption, and deduction from partial data of the earlier statistics of production. For purposes of comparison, as well as most other purposes, they are evidently discredited and discarded by Russian statisticians, who date the birth of a reasonable method and creditable results from the year 1883.

There is still a failure to show comparative area from year to year, which baffles effort to indicate the annual changes in breadth of crop and defies exactness in indicating crop progress.

OFFICIAL RECORD OF RUSSIAN CEREALS.

While official reports do not show annual estimates of area, it is unsafe to assume, as many have done, that there is no increase, and the idea that there has been a decline is still more untenable. With prices doubling since the initiation of the export trade, and exports quadrupling, it would be little less than absurd to suppose that such an influence would be powerless to affect Russian areas in cultivation. But it is not necessary to depend upon assumption, however reasonable, for belief in increase of cereal areas, as the report of 1891, just received, says of the crop failure of the past year :

And if the increased area under cultivation be considered, the shortage of the present year will be found even more considerable than that of 1880.

This report gives specific information concerning the drought of 1891 and its results, with maps illustrating its distribution and local intensity. It included much of the southern portion of Russia, especially the "black earth belt" governments or provinces, embracing about two thirds of this fertile area and many localities beyond its limits. Statistics of meteorology published by the Imperial Geographical Society show that during June, July, and August, and in July particularly, the precipitation was very much below the normal. Drought reigned supreme overmost of the black earth belt, with few and insignificant local exceptions. If some localities had some rainfall during June and July, they had none in August and September, and *vice versa*. The drought caused not only ponds and wells to dry and fields of grain to burn up, but in many localities the foliage on the trees became sere and yellow, and the landscape presented the aspect of an extremely hot autumn, instead of summer.

The regions where the crops of all kinds are the shortest are the

following: The southern portions of the government of Saratoff and Samara, the governments of Astrakhan and Orenburg, the southeastern corner of Perm, the territory of Uralsk, some localities in the territory of Akmolinsk, and the government of Tobolsk; also the eastern portion of the governments of Koursk, Orel, Toula, Voronege, Riazan, Tamboff, Penza, and Kazan, the southern half of the government of Nijni Novgorod, the northern of Simbirsk, and some districts of the government of Viatka.

The following is a table of the principal grain crops of the fifty governments (or provinces) of European Russia for the last eleven years, according to the information of the central statistical committee on the crops from 1883 to 1890, inclusive; the reports of the governors from 1880 to 1882, with the crop report for 1891, based on a preliminary calculation made by the bureau of agriculture and rural industry:

Years.	Rye.		Wheat.		Oats.		All cereals.	
	Chetverts.	Bushels.	Chetverts.	Bushels.	Chetverts.	Bushels.	Chetverts.	Bushels.
1880.....	87,402,470	520,926,471	27,540,647	164,067,830	85,034,765	506,467,060	251,573,683	1,488,371,23
1881.....	105,923,250	630,878,877	44,515,370	265,133,544	101,980,137	607,397,270	311,230,282	1,853,687,58
1882.....	105,159,522	626,330,118	40,267,339	239,832,271	93,613,280	557,560,696	290,986,763	1,733,117,18
1883.....	89,947,092	535,724,880	36,764,302	218,068,183	93,588,004	557,410,152	272,305,438	1,621,831,18
1884.....	115,244,045	686,393,632	44,811,454	260,897,020	84,110,668	500,958,875	293,253,784	1,746,612,53
1885.....	117,817,900	701,723,412	29,874,900	177,034,904	65,248,900	388,622,448	247,209,300	1,472,853,51
1886.....	110,874,800	660,367,331	27,331,100	162,784,032	95,580,600	509,278,054	288,775,600	1,712,967,61
1887.....	124,999,400	744,496,426	47,645,200	283,774,811	103,385,600	615,704,634	329,771,000	1,984,131,68
1888.....	125,649,300	748,367,231	52,689,500	313,818,662	94,305,200	562,639,131	332,203,000	1,978,601,68
1889.....	94,844,700	564,895,033	34,186,600	203,615,390	87,136,100	518,082,612	260,091,360	1,569,103,78
1890.....	113,065,700	673,419,309	35,759,000	212,080,604	90,814,000	540,888,184	292,314,200	1,741,623,22
1891.....	90,100,000	536,635,600	30,700,000	182,819,200	73,300,000	436,574,800	236,700,000	1,469,785,20

The official report says that the shortage of rye approximates very nearly that of 1880, 1883, and 1889, and as to other grains, that of 1880 and 1885. The smallest rye crop in twelve years was in 1880, the largest in 1888. The aggregate rose above 700,000,000 bushels in three different years. In the first half of the decade, 1880-84, the average yield of rye was 503,736,379 bushels; in the second, 574,185,600, an increase of 14 per cent. In wheat there was no increase, as three of the five years of the second half produced short crops. Taking all the cereals together, the first half averaged 1,419,349,860 bushels per annum; the second, 1,458,051,100 bushels.

Perhaps the fairest way of showing the shortage of 1891 is by comparison with the eleven previous years, the longest period of continued official record and as far back as the officials appear to indorse the approximate accuracy of Russian crop statistics. Some allowance should be made for a tendency to increase of acreage, which would make the relative deficiency larger than the figures indicate. The comparison is as follows:

	Rye.	Wheat.	Oats.	All cereals.
1880-1890.....bushels..	644,365,092	228,164,296	538,673,556	1,716,203,681
1891.....do.....	536,635,600	182,849,200	436,574,800	1,159,759,200
Deficiency.....	108,230,692	45,315,096	102,098,756	356,471,481

This deficiency is 16.8 per cent for rye, 19.9 for wheat, 19 for oats, and 17.9 per cent for all cereals together. The Russian Government

claims that there is a sufficiency of cereals in the country for subsistence of the people until the next crop comes in. There was a considerable export prior to the issue of the ukase forbidding it. It is claimed that stocks intended for sale and shipment are still held on speculation. If the aggregate supplies should be equal to consumption, it is a difficult if not a practically impossible task to distribute them so equally and promptly as to relieve the imminence of starvation of multitudes of poor people. Many of the districts most deficient have few if any railroad facilities, adding to the difficulty of affording relief.

The Russian Government is putting forth earnest efforts and making commendable progress in collection of crop statistics, but labors under the same difficulty that in less degree perhaps militates against our own success in that direction—the failure of a class of the population to realize the importance of such work and their inability to make sufficiently intelligent and accurate returns, and sometimes their hostility to any publicity of crop returns, from a mistaken notion that it places them in the hands of speculators, whereas it furnishes the most potent and effective safeguard against the results of speculation.

NUMBERS AND VALUES OF FARM ANIMALS.

The report of increase or decrease of farm animals and average prices of each kind of all ages is made on the 1st day of January of each year, and published in the January-February report. The following statement is a comparison of the aggregates of numbers of the several kinds of domestic animals in 1890 and 1891:

Stock.	1890.	1891.	Increase or decrease.
Horses	14,213,837	14,056,750	—157,087
Mules	2,331,027	2,290,532	— 34,495
Milch cows	15,952,883	16,019,591	+ 66,708
Oxen and other cattle	30,849,024	30,875,048	+ 26,024
Sheep	44,326,072	43,431,136	—904,936
Swine	51,602,780	50,625,106	—977,674

There was a slight reduction of values reported in January of 1891, as compared with the prices of the previous year. In cattle, and especially in swine, this decline was due to reduction in average quality rather than to the lower price of meat. The scarcity and high price of corn forced such numbers of poorly-fattened animals upon the market as to reduce temporarily the price of all. During the past year, however, prices in the principal markets, for meats particularly, have advanced, and doubtless the farm values will show larger averages than these reported below:

Stock.	1890.	1891.	Increase or decrease.
Horses	\$68.84	\$67.00	—\$1.84
Mules	78.25	77.88	— .37
Milch cows	22.14	21.62	— .52
Oxen and other cattle	15.21	14.76	— .45
Sheep	2.27	2.50	+ .23
Swine	4.72	4.15	— .57

Estimated number of animals on farms and ranches, total value of each kind, and average price, January, 1891.

States and Territories.	Horses.			Mules.			Milch cows.		
	Number.	Average price.	Value.	Number.	Average price.	Value.	Number.	Average price.	Value.
Maine	100,651	\$33.23	\$3,383,978				172,430	\$26.40	\$4,552.32
New Hampshire	32,928	86.90	4,599,294				104,041	26.50	2,756.07
Vermont	84,353	79.03	6,666,246				234,612	23.50	5,514.82
Massachusetts	63,200	106.37	6,722,304				176,476	32.40	5,717.25
Rhode Island	9,258	107.13	1,098,980				24,281	33.00	805.23
Connecticut	51,376	102.78	5,280,672				131,897	32.00	4,316.54
New York	640,253	93.45	59,851,035	5,288	\$90.42	\$509,882	1,516,819	27.21	41,817.80
New Jersey	97,257	101.77	9,898,090	9,400	117.11	1,101,494	185,328	34.02	6,301.12
Pennsylvania	570,515	91.04	51,937,801	24,021	104.68	2,514,778	919,802	26.67	24,523.50
Delaware	23,090	87.32	2,008,360	4,184	111.05	464,654	20,543	24.50	723.84
Maryland	126,394	80.14	10,129,235	13,023	104.56	1,424,457	145,244	25.00	3,631.10
Virginia	243,758	72.85	17,781,396	36,444	88.21	3,214,830	277,477	21.09	5,875.45
North Carolina	146,518	78.25	11,464,857	38,221	88.94	3,405,226	266,712	17.50	4,667.46
South Carolina	68,897	89.49	6,165,754	79,209	98.02	7,770,216	156,575	21.23	3,324.87
Georgia	112,160	83.84	9,403,231	157,257	95.97	15,062,208	351,072	18.10	6,354.80
Florida	34,737	71.40	2,480,361	12,450	91.49	1,129,894	54,851	10.50	580.62
Alabama	133,457	73.61	9,828,262	143,258	80.46	12,815,875	308,847	15.90	4,908.12
Mississippi	133,284	66.15	8,848,373	186,614	85.10	15,880,261	306,142	15.50	4,742.21
Louisiana	122,157	53.83	6,575,443	95,735	83.04	7,949,274	175,837	17.00	2,989.29
Texas	1,512,385	32.89	49,613,323	215,277	55.43	11,132,965	851,777	14.13	12,035.51
Arkansas	190,890	55.11	10,519,901	132,463	67.55	8,947,576	329,121	13.75	4,525.41
Tennessee	330,174	70.65	21,297,050	224,601	73.67	16,551,505	566,008	16.61	9,408.95
West Virginia	146,647	67.55	9,905,641	6,867	75.36	517,512	181,738	22.50	4,080.16
Kentucky	394,483	74.39	29,346,700	148,065	73.26	10,847,747	317,083	21.03	6,668.83
Ohio	779,323	77.67	60,529,063	23,083	83.37	1,999,493	763,403	24.60	18,800.62
Michigan	472,633	81.18	38,366,437	6,065	93.90	572,325	459,475	25.18	11,569.51
Indiana	647,650	78.35	50,735,543	51,674	70.20	3,625,736	604,578	21.50	13,090.17
Illinois	1,123,973	70.48	79,214,869	94,554	75.96	7,182,792	1,083,922	22.00	24,060.24
Wisconsin	433,442	73.27	31,757,833	6,530	86.30	568,797	694,826	21.50	14,938.79
Minnesota	590,335	76.06	44,728,397	11,412	88.03	1,004,563	565,835	20.50	11,601.62
Iowa	1,095,809	70.05	76,720,750	42,739	77.74	3,321,618	1,278,612	18.75	23,918.85
Missouri	835,564	57.81	48,573,501	217,000	65.94	13,027,401	812,828	17.00	13,818.06
Kansas	748,108	58.27	43,568,517	89,978	72.68	6,539,343	758,321	18.50	13,877.41
Nebraska	558,297	62.97	35,158,748	45,792	79.55	3,642,786	424,270	18.50	7,848.85
California	300,921	67.22	20,262,579	43,659	79.41	3,467,093	282,659	29.00	8,179.71
Oregon	181,296	47.44	8,598,290	3,617	62.63	228,618	102,040	28.50	2,908.14
Nevada	48,947	48.13	2,355,589	1,777	68.61	121,912	16,539	31.00	513.29
Colorado	121,652	53.75	6,567,661	8,890	83.67	740,616	62,283	28.11	1,750.83
Arizona	31,075	45.00	1,396,665	2,635	60.00	158,500	16,780	27.50	461.75
Dakota	237,244	65.55	15,481,065	17,010	86.54	1,471,818	211,326	18.25	3,856.59
Idaho	89,634	60.04	5,381,480	1,738	51.60	89,638	32,068	29.00	929.97
Montana	151,547	59.45	9,078,527	1,838	53.01	97,424	34,065	28.67	974.92
New Mexico	33,504	51.02	1,719,255	9,750	45.40	442,421	10,556	25.00	263.19
Utah	90,669	36.59	3,315,151	4,053	45.75	177,297	52,910	20.80	1,100.78
Washington	148,291	70.03	10,384,819	1,506	80.50	116,830	92,005	37.00	3,404.18
Wyoming	142,986	59.01	8,462,536	2,304	72.38	166,763	13,005	33.00	429.16
Total	14,056,750	67.00	941,823,222	2,290,532	77.88	178,847,370	16,019,591	21.62	346,457.18

States and Territories.	Oxen and other cattle.			Sheep.			Hogs.		
	Number.	Average price.	Value.	Number.	Average price.	Value.	Number.	Average price.	Value.
Maine	157,386	\$23.94	\$3,767,010	547,670	\$3.11	\$1,709,516	78,233	\$8.20	\$641.678
New Hampshire	116,169	22.87	2,657,092	183,183	2.93	536,909	32,186	7.88	251.069
Vermont	167,362	21.41	3,582,884	351,249	3.12	1,096,038	75,551	7.34	554.210
Massachusetts	96,799	26.32	2,548,156	55,965	3.73	208,470	67,208	9.21	619.067
Rhode Island	11,950	26.67	318,713	29,433	4.06	121,009	19,796	8.50	167.205
Connecticut	101,123	28.64	2,896,129	45,824	4.13	189,268	55,042	9.05	498.128
New York	783,634	26.95	21,118,774	1,333,583	3.81	5,113,635	672,595	6.55	4,401.538
New Jersey	65,830	26.95	1,768,774	169,075	3.95	669,497	194,436	8.40	1,633.630
Pennsylvania	85,222	22.71	18,965,976	1,039,502	3.71	3,858,631	1,157,613	7.20	8,341.815
Delaware	36,696	21.17	776,027	22,517	3.58	80,701	51,185	5.52	282.541
Maryland	124,780	20.15	2,514,161	156,838	3.67	575,752	346,510	5.11	1,781.960
Virginia	419,522	16.61	6,976,457	444,563	2.49	1,088,729	969,273	3.54	3,426.581
North Carolina	390,446	11.12	4,315,110	398,226	1.79	678,975	1,291,893	3.36	4,343.341
South Carolina	268,292	12.54	3,363,625	98,970	1.82	180,125	670,652	3.82	2,528.957
Georgia	509,200	9.87	5,018,752	583,017	1.72	638,023	1,610,748	3.08	4,965.651
Florida	348,215	8.78	3,051,828	111,455	1.83	205,784	301,601	4.28	1,295.521
Alabama	121,188	8.90	1,079,661	274,788	1.56	427,673	1,514,701	2.86	4,328.162
Mississippi	295,731	9.59	2,837,023	235,345	1.49	350,899	1,371,622	2.65	3,630.662
Louisiana	419,502	8.89	3,730,623	113,951	1.60	182,825	706,947	3.17	2,243.890
Texas	7,024,496	8.89	62,144,260	4,990,272	1.52	7,601,682	2,321,216	2.83	6,569.156
Arkansas	704,654	8.46	5,961,934	269,484	1.47	395,737	1,679,908	2.19	3,672.278

Estimated number of animals on farms, total value of each kind, etc.—Continued.

States and Territories.	Oxen and other cattle.			Sheep.			Hogs.		
	Number.	Average price.	Value.	Number.	Average price.	Value.	Number.	Average price.	Value.
Tennessee.....	460,349	\$10.42	\$1,798,495	511,118	\$2.07	\$1,055,603	2,287,059	\$3.32	\$7,590,293
West Virginia.....	286,538	18.32	5,248,402	518,827	2.81	1,458,423	476,501	3.62	1,723,599
Kentucky.....	476,592	16.73	7,974,869	765,679	3.13	2,399,485	2,300,204	3.66	8,413,689
Ohio.....	917,539	21.49	19,714,982	4,061,897	3.25	13,189,386	2,741,565	4.19	11,489,352
Michigan.....	503,899	20.15	10,155,165	2,263,249	3.25	7,348,316	910,242	4.48	4,073,354
Indiana.....	1,053,627	18.07	19,041,149	1,150,200	3.58	4,114,151	2,560,772	4.76	12,191,323
Illinois.....	1,765,385	17.92	31,628,292	770,993	3.19	2,456,709	4,944,258	4.98	24,602,627
Wisconsin.....	845,429	16.28	13,761,979	889,910	2.92	2,597,114	1,169,660	5.25	5,831,263
Minnesota.....	617,256	15.19	9,377,356	330,649	2.67	881,245	538,077	5.50	2,961,037
Iowa.....	2,080,247	17.55	47,038,341	452,025	3.17	1,430,750	5,921,100	4.98	29,475,236
Missouri.....	1,819,122	15.07	27,412,175	898,650	2.42	2,173,834	4,586,400	3.46	15,612,106
Kansas.....	1,920,893	16.75	32,168,437	447,079	2.25	1,007,046	3,144,324	3.98	12,516,295
Nebraska.....	1,345,569	16.73	22,507,902	234,612	2.34	548,171	2,309,779	4.23	9,772,676
California.....	558,244	17.73	9,895,321	3,712,310	2.20	8,157,801	517,600	5.26	2,723,611
Oregon.....	724,592	17.20	12,463,782	2,431,759	2.12	5,154,114	229,639	4.08	936,928
Nevada.....	317,498	15.46	4,909,789	504,710	2.35	1,187,835	12,501	6.15	76,879
Colorado.....	1,017,465	15.77	16,046,133	1,819,569	2.37	4,306,555	23,666	5.35	126,353
Arizona.....	725,004	14.00	10,150,056	563,643	2.25	1,335,697	20,140	5.30	106,742
Dakota.....	739,815	15.91	11,771,792	274,319	3.16	866,520	428,912	5.03	2,155,285
Idaho.....	381,732	14.25	5,439,681	501,978	2.30	1,154,549	34,100	7.00	238,700
Montana.....	932,697	15.27	14,242,293	2,089,337	2.37	4,948,595	35,105	7.13	250,302
New Mexico.....	1,341,856	11.01	14,771,151	3,123,663	1.69	5,268,657	24,852	5.50	136,688
Utah.....	383,553	13.71	5,258,518	2,055,900	2.47	5,070,261	47,641	7.36	350,640
Washington.....	443,257	20.97	9,293,106	673,000	2.62	1,763,687	147,713	6.01	888,032
Wyoming.....	1,090,101	13.47	14,766,681	1,119,110	2.25	2,521,914	10,400	5.79	60,211
Total.....	36,875,648	14.76	544,127,908	43,431,136	2.50	108,397,447	50,625,106	4.15	210,193,923

Since those returns were made the tendency has been to increase of values in sheep and swine and a revival of interest in those branches of farm economy. A decided interest is manifested in the care and improvement of flocks, and a more hopeful feeling prevails due to a greater confidence in the stability and fair administration of laws affecting sheep husbandry. The reopening of European ports to the pork products has had a stimulating effect upon production, trade, and prices. A future of enlargement and prosperity evidently awaits this industry. The cattle industries are also affected favorably by the enlargement of consumption at home and demand from abroad.

NUMBERS AND VALUES JANUARY 1, 1892.

The returns of January, 1892, showing numbers and values by comparison with results of the previous January investigation, indicate an increase in numbers of farm animals.

A slight increase in value appears in store cattle and beeves, sheep and swine, a decline of 1 per cent in the price of cows, 2 per cent in horses, and 3 per cent in mules.

In Texas, Georgia, and South Carolina the value of horses is well sustained. In most of the Southern States there is a decline. In the Ohio Valley the reduction is greater than in the northern tier of States. Prices of Rocky Mountain herds are also lower.

Prices of cows are somewhat higher in New England, Virginia, North Carolina, and Georgia, with decline in Connecticut, New York, and Pennsylvania. There is little change in the States of the Ohio Valley, but some reduction in Michigan, Wisconsin, Minnesota, and Iowa. Values of other cattle have slightly improved in New England and in several of the central States of the West, while declining a little in some of the States of the Northwest. The increase in value of sheep, though not locally equal, is very general throughout the country.

Estimated number of animals on farms and ranches, total value of each kind, and average price, January, 1892.

HORSES AND MULES.

States and Territories.	Horses.			Mules.		
	Number.	Average price.	Value.	Number.	Average price.	Value.
Maine	110,719	\$89.06	\$9,860,299			
New Hampshire	53,985	82.32	4,443,906			
Vermont	90,258	76.38	6,894,201			
Massachusetts	64,464	104.36	6,727,722			
Rhode Island	10,361	104.51	1,082,840			
Connecticut	46,238	102.14	4,722,872			
New York	659,461	80.36	58,920,968	5,182	\$89.30	\$514,586
New Jersey	87,531	100.34	8,782,860	8,465	113.76	962,895
Pennsylvania	621,861	83.41	51,867,709	29,065	101.95	2,962,307
Delaware	25,300	84.77	2,144,681	4,812	107.07	515,295
Maryland	131,450	79.81	10,490,907	13,487	105.52	1,423,087
Virginia	246,196	74.77	18,407,152	37,173	89.30	3,319,261
North Carolina	131,866	78.62	10,366,953	100,185	88.13	8,658,881
South Carolina	60,629	87.18	5,285,433	86,403	95.57	8,257,194
Georgia	104,309	81.02	8,450,807	157,257	94.86	14,916,899
Florida	32,653	67.59	2,207,111	10,498	89.74	942,127
Alabama	121,446	69.87	8,485,421	136,085	86.58	11,783,744
Mississippi	155,577	62.56	9,733,285	182,354	81.82	13,282,547
Louisiana	127,043	51.65	6,562,241	91,904	81.76	7,514,431
Texas	1,299,908	31.48	38,092,747	230,239	53.30	12,272,820
Arkansas	187,078	55.37	10,359,133	135,112	68.48	9,252,839
Tennessee	312,181	68.94	21,522,778	222,414	71.45	15,891,596
West Virginia	155,446	65.73	10,216,770	7,210	73.21	527,229
Kentucky	402,373	69.32	27,890,626	151,026	69.34	10,472,211
Ohio	888,428	75.03	66,658,761	18,947	81.61	1,546,195
Michigan	519,896	78.40	40,757,393	3,779	93.67	353,801
Indiana	725,256	73.61	53,388,703	56,841	76.39	4,342,014
Illinois	1,337,528	68.69	91,872,771	106,846	72.38	7,733,399
Wisconsin	463,783	74.26	34,441,649	5,342	82.15	438,619
Minnesota	461,185	76.56	35,309,345	10,271	84.65	869,419
Iowa	1,314,360	66.13	86,921,929	41,029	73.01	2,995,598
Missouri	950,566	57.75	54,892,332	248,850	63.94	15,911,437
Kansas	935,135	58.18	55,344,187	92,677	71.85	6,658,899
Nebraska	625,293	58.05	36,298,768	46,708	74.36	3,473,182
California	415,059	62.67	26,010,045	54,574	74.72	4,077,545
Oregon	226,545	43.75	9,911,171	4,741	59.34	281,343
Nevada	57,757	42.80	2,471,975	1,088	64.01	108,051
Colorado	161,268	51.71	8,339,066	5,184	79.81	413,744
Arizona	51,658	40.00	2,066,320	1,356	56.00	74,814
North Dakota	142,000	70.73	10,044,001	8,000	89.55	716,372
South Dakota	260,000	65.98	17,154,826	8,200	81.98	672,274
Idaho	185,497	35.00	6,492,395	1,043	45.00	46,965
Montana	197,011	36.20	7,131,796	1,231	47.16	58,053
New Mexico	93,000	29.09	2,704,005	3,750	43.31	162,413
Utah	67,957	35.54	2,414,940	2,028	54.92	111,369
Washington	170,535	58.75	10,018,740	1,371	70.10	96,108
Wyoming	169,090	34.19	5,782,190	1,382	70.94	98,040
Total	15,498,140	65.01	1,007,593,636	2,314,699	75.55	174,882,070

MILCH COWS, OXEN, AND OTHER CATTLE.

States and Territories.	Milch cows.			Oxen and other cattle.		
	Number.	Average price.	Value.	Number.	Average price.	Value.
Maine	175,879	\$26.50	\$4,660,794	152,664	\$24.74	\$3,776,929
New Hampshire	106,122	26.50	2,812,233	113,846	23.48	2,673,550
Vermont	239,335	24.33	5,823,021	165,688	22.26	3,687,798
Massachusetts	176,476	32.72	5,774,295	96,799	25.78	2,495,797
Rhode Island	24,524	32.00	784,768	11,950	28.73	343,299
Connecticut	136,246	29.14	3,970,208	100,111	29.03	2,905,812
New York	1,552,217	26.18	40,637,041	775,798	26.67	20,693,631
New Jersey	189,035	35.00	6,616,225	63,845	28.75	1,835,731
Pennsylvania	929,091	25.25	23,459,548	835,222	22.17	18,514,790
Delaware	31,020	25.75	798,765	27,941	23.33	651,941
Maryland	147,541	26.21	3,867,050	121,044	21.79	2,637,328
Virginia	280,252	22.25	6,235,607	419,523	17.24	7,233,456
North Carolina	269,379	17.60	4,741,070	390,446	11.59	4,526,990
South Carolina	155,009	20.31	3,148,233	204,126	12.88	2,629,043
Georgia	354,583	18.00	6,382,494	569,200	9.86	5,615,450

Estimated number of animals on farms and ranches, total value of each kind, etc.—Cont'd.

MILCH COWS, OXEN, AND OTHER CATTLE—Continued.

States and Territories.	Milch cows.			Oxen and other cattle.		
	Number.	Average price.	Value.	Number.	Average price.	Value.
Florida	56,600	\$15.00	\$849,000	553,727	\$9.02	\$4,994,120
Alabama	311,774	15.00	4,676,610	445,007	9.00	4,006,179
Mississippi	312,265	14.75	4,605,909	419,946	7.97	3,346,971
Louisiana	179,354	17.10	3,066,953	298,688	10.01	2,989,123
Texas	868,811	14.25	12,380,557	7,024,406	8.85	62,177,330
Arkansas	342,286	13.75	4,706,433	725,794	8.75	6,353,236
Tennessee	373,736	16.50	6,168,644	469,556	10.48	4,921,187
West Virginia	183,555	22.71	4,168,534	292,269	18.67	5,455,723
Kentucky	320,264	21.75	6,965,742	467,060	16.97	7,923,866
Ohio	783,403	25.00	19,585,075	871,662	22.44	19,559,404
Michigan	459,475	24.24	11,137,074	508,938	20.67	10,521,369
Indiana	657,048	23.25	15,276,366	1,085,236	19.28	20,925,520
Illinois	1,101,861	22.23	24,561,060	1,747,731	18.88	32,992,610
Wisconsin	701,774	20.54	14,414,438	836,975	16.43	13,749,322
Minnesota	577,254	19.25	11,112,140	641,946	15.87	10,187,680
Iowa	1,304,184	18.77	24,479,534	2,707,409	18.76	50,792,352
Missouri	869,726	17.60	15,220,205	1,928,269	16.50	31,821,846
Kansas	773,489	18.40	14,232,198	1,978,520	16.78	33,207,282
Nebraska	530,338	18.75	9,943,838	1,614,676	16.59	26,780,200
California	290,521	26.95	7,829,541	602,904	17.39	10,481,663
Oregon	106,122	25.00	2,653,050	797,051	16.42	13,090,374
Nevada	14,903	27.00	409,833	317,498	14.77	4,689,446
Colorado	60,416	26.00	1,570,816	1,037,814	16.49	17,112,302
Arizona	17,797	25.00	444,925	761,254	15.00	11,418,810
North Dakota	65,000	21.19	1,377,350	272,000	17.17	4,669,587
South Dakota	133,000	19.00	2,527,000	410,000	16.25	6,662,500
Idaho	32,709	27.00	883,143	515,338	15.25	7,858,905
Montana	35,705	28.75	1,026,519	1,025,967	16.30	16,725,323
New Mexico	18,775	20.00	375,500	1,288,182	11.01	14,179,659
Utah	54,497	22.21	1,210,378	402,731	14.10	5,679,512
Washington	96,605	35.00	3,381,175	447,680	20.88	9,345,532
Wyoming	13,395	32.00	428,640	1,107,062	14.37	15,910,696
Total	16,416,351	21.40	351,378,132	37,651,239	15.16	570,749,155

SHEEP AND HOGS.

States and Territories.	Sheep.			Hogs.		
	Number.	Average price.	Value.	Number.	Average price.	Value.
Maine	569,577	\$3.01	\$1,717,274	76,688	\$8.48	\$650,317
New Hampshire	188,678	2.87	540,751	51,664	8.24	425,711
Vermont	358,274	3.29	1,179,725	74,795	7.85	587,412
Massachusetts	57,644	3.89	223,947	66,536	9.80	652,056
Rhode Island	20,433	4.35	88,884	13,658	8.90	121,559
Connecticut	47,199	4.08	192,454	54,492	9.36	510,260
New York	1,421,455	3.80	5,401,529	672,595	7.49	5,035,721
New Jersey	102,077	4.05	413,922	190,547	9.23	1,758,746
Pennsylvania	1,091,477	3.83	4,178,173	1,157,613	7.60	8,792,072
Delaware	22,967	3.87	88,768	53,232	6.35	338,022
Maryland	164,680	3.91	644,558	349,975	6.00	2,098,449
Virginia	449,009	3.05	1,370,016	978,968	3.67	3,596,722
North Carolina	390,261	1.82	710,275	1,253,136	3.70	4,639,735
South Carolina	89,073	1.89	167,903	684,065	4.13	2,827,924
Georgia	383,017	1.76	673,956	1,091,275	3.37	3,682,832
Florida	117,028	2.06	241,469	386,913	2.28	883,710
Alabama	269,292	1.65	443,927	1,499,554	2.91	4,356,205
Mississippi	228,578	1.50	335,867	1,357,906	2.71	3,685,357
Louisiana	118,488	1.61	191,240	756,433	3.16	2,390,328
Texas	5,040,175	1.55	7,808,239	2,821,246	3.15	7,311,924
Arkansas	264,094	1.50	396,537	1,063,109	2.39	3,978,158
Tennessee	506,007	2.19	1,105,879	2,287,059	3.38	7,741,239
West Virginia	529,204	3.11	1,646,354	481,266	3.81	1,831,098
Kentucky	773,336	3.18	2,456,890	2,340,208	3.86	9,006,686
Ohio	4,468,087	3.30	14,724,581	2,851,228	4.65	13,258,212
Michigan	2,353,779	3.21	7,560,338	892,037	5.17	4,611,833
Indiana	1,161,702	3.70	4,298,762	2,580,380	4.94	12,787,061
Illinois	848,092	3.57	3,025,314	4,894,815	5.43	26,582,760
Wisconsin	907,708	2.96	2,688,630	1,109,660	5.34	5,925,584
Minnesota	357,101	2.80	998,598	591,885	5.79	3,429,384
Iowa	565,031	3.42	1,933,084	7,105,320	5.86	41,645,703

Estimated number of animals on farms and ranches, total value of each kind, etc.—Contd.

SHEEP AND HOGS—Continued.

States and Territories.	Sheep.			Hogs.		
	Number.	Average price.	Value.	Number.	Average price.	Value.
Missouri.....	916,623	\$2.57	\$2,355,262	4,632,264	\$3.58	\$16,525.30
Kansas.....	469,433	2.34	1,096,595	3,173,767	4.76	15,125.72
Nebraska.....	269,804	2.56	690,887	2,586,952	5.23	13,527.22
California.....	4,083,541	2.42	9,884,211	512,424	5.35	2,740.62
Oregon.....	2,456,077	2.24	5,491,789	227,343	4.32	982.55
Nevada.....	504,710	2.49	1,256,223	12,626	6.82	86.05
Colorado.....	1,710,395	2.49	4,263,673	23,842	5.53	132.75
Arizona.....	611,452	2.30	1,406,340	20,140	5.40	108.76
North Dakota.....	320,000	3.22	1,030,400	95,000	6.33	601.35
South Dakota.....	270,000	3.08	831,060	275,000	5.70	1,562.50
Idaho.....	527,077	2.40	1,264,985	64,790	7.25	469.73
Montana.....	2,089,337	2.50	5,228,566	35,105	7.50	263.29
New Mexico.....	2,967,489	1.54	4,550,566	24,852	5.90	146.62
Utah.....	2,055,900	2.26	4,650,466	48,594	8.57	416.54
Washington.....	686,521	6.71	1,838,824	152,144	6.49	987.63
Wyoming.....	1,141,492	2.46	2,808,070	10,920	6.08	66.20
Total.....	44,958,365	2.58	116,121,270	52,398,619	4.60	241,601.65

COMMERCIAL MOVEMENT OF FARM ANIMALS.

The enlargement of the volume of distribution of domestic animals has been very rapid in recent years. The increase of population does not account for the rapidity of advance as measured by receipts and shipments recorded at the principal markets. There may have been some increase in the rate of consumption, a somewhat more generous use of meat in the popular dietary, yet the main cause of apparently abnormal increase of volume in the main channels of trade is due to the concentration of the trade in few hands, the drying up of small streams of supply from the agricultural areas of the older States, and a larger dependence on the great pastoral areas of the country beyond the Missouri. Formerly nearly every farmer was a meat-producer, and every village had its butcher; now the farmer has become a dairyman, the butcher is an agent for the sale of Western and Texas beef, and the consumer is in the clutches of a system which is relegating beef production to the Western wilds and a mixture of Spanish-English breeds.

The four markets which include nearly all Western distribution are Chicago, St. Louis, Kansas City, and Omaha. Of the receipts of 1891 Chicago furnishes 55 per cent, Kansas City 22, St. Louis 13, and Omaha 10. Twenty-one years ago, in 1870, 69 per cent of the receipts were shipped away; last year only 43. This difference is due to the canning and packing industries of those cities, without which the percentage of the greatly enlarged receipts required for local consumption would be diminished.

The increase has been heavy in all kinds of farm animals, nearly sevenfold (680 per cent) for receipts of cattle, while the shipments are nearly four times as much (387 per cent). The receipts of sheep are increased sixfold, and shipments 861 per cent, though only about four-tenths of the receipts are shipped. The hogs show a surprising increase, these markets having scarcely an existence twenty years ago, Chicago taking the prominence before enjoyed by Cincinnati. More than forty times as many were received in 1891 as in 1870. Receipts ran to 14,042,906, and shipments made an aggregate of 4,517,395.

REPORT OF THE SECRETARY OF AGRICULTURE.

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Receipts and shipments of Western cities.

CATTLE.

Years.	Chicago.		St. Louis.		Kansas City.		Omaha.	
	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.
1870....	532,964	391,709	201,422	129,748	21,000	No record.	.....	.....
1875....	920,843	696,534	335,742	216,701	174,754	126,262	.....	.....
1880....	1,382,477	886,014	424,720	228,879	244,709	194,421	.....	.....
1885....	1,905,518	744,093	386,320	233,249	506,627	402,381	114,163	83,233
1886....	1,963,900	704,073	377,559	212,958	490,971	370,350	144,457	73,120
1887....	2,382,008	791,483	464,828	277,419	669,224	483,372	235,723	151,419
1888....	2,611,543	968,385	546,675	336,206	1,056,086	682,622	340,469	206,064
1889....	3,023,281	1,259,971	508,190	297,879	1,220,343	744,510	467,340	227,921
1890....	3,484,280	1,260,309	639,014	361,225	1,472,229	923,552	606,699	283,880
1891....	3,250,359	1,066,264	779,499	464,794	1,270,917	739,093	593,044	267,730

Years.	Receipts.	Shipments.	Years.	Receipts.	Shipments.
1870.....	755,386	521,457	1887.....	3,751,783	1,703,693
1875.....	1,431,339	1,039,497	1888.....	4,554,973	2,193,277
1880.....	2,051,906	1,309,014	1889.....	5,219,154	2,530,281
1885.....	2,912,628	1,462,056	1890.....	6,202,222	2,828,966
1886.....	2,976,878	1,361,103	1891.....	5,803,819	2,537,881

SHEEP

Years.	Chicago.		St. Louis.		Kansas City.		Omaha.	
	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.
1870....	349,853	116,711	94,477	11,649	.....	.....	.....	.....
1875....	418,948	243,604	125,679	37,784	25,327	17,742	.....	.....
1880....	335,810	156,510	205,969	93,522	50,611	36,285	.....	.....
1885....	1,003,598	260,277	362,858	233,391	221,801	115,755	18,985	8,408
1886....	1,008,790	206,912	328,985	202,728	172,659	83,234	40,195	17,728
1887....	1,360,862	445,094	417,425	287,018	209,956	103,126	76,014	56,444
1888....	1,515,014	601,241	456,069	316,676	351,050	169,932	158,503	118,208
1889....	1,832,469	711,315	358,405	255,375	370,772	174,851	159,503	103,250
1890....	2,182,667	929,854	358,506	252,151	535,860	336,207	156,186	94,404
1891....	2,153,537	688,205	402,089	277,886	380,760	178,271	170,849	89,416

Years.	Receipts.	Shipments.	Years.	Receipts.	Shipments.
1870.....	444,330	128,360	1887.....	2,064,257	891,682
1875.....	569,954	299,130	1888.....	2,481,236	1,206,057
1880.....	592,390	286,317	1889.....	2,721,239	1,244,791
1885.....	1,607,242	617,831	1890.....	3,233,228	1,612,676
1886.....	1,559,629	570,602	1891.....	3,114,135	1,233,778

HOGS.

Years.	Chicago.		St. Louis.		Kansas City.		Omaha.	
	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.
1870....	1,693,158	924,453	310,850	17,156	36,000	No record.	.....	.....
1875....	3,912,110	1,582,643	628,569	126,729	63,350	15,790	.....	.....
1880....	7,059,355	1,394,990	1,840,684	770,769	676,477	152,920	.....	.....
1885....	6,937,535	1,797,446	1,455,535	789,487	2,358,718	801,162	130,867	71,919
1886....	6,718,761	2,090,784	1,264,471	530,362	2,264,484	538,065	390,487	187,369
1887....	5,470,952	1,812,001	1,052,240	324,745	2,423,262	524,492	1,011,706	140,726
1888....	4,921,712	1,751,829	929,230	294,869	2,008,984	413,937	1,283,600	333,228
1889....	5,088,526	1,786,659	1,120,930	420,310	2,073,910	331,434	1,206,605	179,916
1890....	7,063,828	1,985,700	1,250,780	667,832	2,865,171	558,227	1,673,314	275,638
1891....	8,600,805	2,962,514	1,380,569	704,378	2,599,109	605,457	1,492,423	245,046

Years.	Receipts.	Shipments.	Years.	Receipts.	Shipments.
1870.....	346,850	17,156	1887.....	9,958,100	2,801,064
1875.....	4,601,029	1,725,162	1888.....	9,143,526	2,793,863
1880.....	9,576,516	2,318,679	1889.....	10,389,971	2,718,310
1885.....	10,882,655	3,460,014	1890.....	13,562,102	3,487,397
1886.....	10,638,203	3,346,520	1891.....	14,042,906	4,517,395

Receipts of Eastern cities.

CATTLE.

Years.	New York.	Boston.	Philadel- phia.	Baltimore.	Total.
1870	301,076	121,592	126,738	89,021	708,427
1875	457,057	145,285	152,830	112,679	867,851
1880	679,987	230,079	218,606	138,969	1,267,641
1885	562,447	112,995	194,644	90,870	960,956
1890	513,470	113,310	176,025	96,357	899,162
1887	498,048	90,584	122,297	85,106	796,035
1888	515,593	124,416	134,574	170,113	844,696
1889	638,937	167,542	150,482	205,479	1,162,440
1890	684,502	167,974	168,733	219,009	1,240,218
1891	653,556	164,278	.....	183,385	.....

SHEEP.

Years.	New York.	Boston.	Philadel- phia.	Baltimore.	Total.
1870	1,403,878	450,997	682,000	175,000	2,711,875
1875	1,233,968	372,370	491,500	191,485	2,298,323
1880	1,656,955	476,785	623,494	248,047	3,005,281
1885	1,849,277	639,847	616,573	178,712	3,284,409
1890	1,997,751	521,069	583,579	219,645	3,321,944
1887	2,025,116	591,476	588,279	227,456	3,432,127
1888	1,882,763	538,490	594,612	438,910	3,454,775
1889	1,805,805	540,460	537,431	421,951	3,305,647
1890	1,798,615	583,545	511,142	381,025	3,274,327
1891	1,881,913	594,896	.....	422,131	.....

SWINE.

Years.	New York.	Boston.	Philadel- phia.	Baltimore.	Total.
1870	889,625	180,330	189,500	300,000	1,559,455
1875	1,388,517	331,989	243,300	279,631	2,243,437
1880	1,719,137	691,859	346,960	336,867	3,094,813
1885	1,919,063	799,332	326,456	265,581	3,310,432
1890	1,980,656	939,787	333,849	323,643	3,583,935
1887	1,791,541	1,039,692	329,561	504,619	3,665,413
1888	1,549,837	1,063,827	344,719	613,950	3,572,333
1889	1,761,923	1,143,314	401,424	702,966	4,009,627
1890	2,126,446	1,231,173	465,094	837,167	4,659,880
1891	2,177,321	1,539,191	.....	908,079	.....

The increase of receipts has been slower in Eastern than in Western cities; in the former they represent local consumption and export, while in the latter the requirement of the canning industry is a very large element in distribution. In New York, in cattle the receipts have not been doubled in twenty years; in sheep the advance is quite limited; while in hogs the increase has been nearly 200 per cent.

MEAT EXPORTATION.

The evolution of meat exportation was slow from its early initiation up to a recent date. Salted meats and tallow were the only forms known for many decades. Forty years ago there was a considerable exportation of Texas and Florida cattle to Cuba and other West India islands. They were light in weight, thin in flesh, and low in price. In 1860 they averaged \$17.59 in value. In the seventies a better quality of beefs—among the best, in fact—began to be shipped to Great Britain. In 1877 the fresh-beef shipments in refrigerator ships were first made.

In 1870 the value of all shipments of beeves and beef products was \$6,191,626. In 1891 the total value was \$65,533,564. In 1870 the number of pounds of beef products exported was only 64,240,829. In 1891 the aggregate was 507,229,428 pounds, or enough to require the slaughter of more than a million cattle which would average a net product of 500 pounds. The number of beeves exported increased from 27,530 in 1870, worth only \$439,987, or \$15.98 each, to 374,679, worth \$30,445,249, or \$81.26 each. In this short period more than ten times as many were shipped, while the value was more than seventy times greater.

Exports of beef products.

QUANTITY.

Years.	Beef products.				
	Salted or cured.	Fresh.	Canned.	Other, cured.	Tallow.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1870	26,727,773				37,513,056
1871	43,880,217				33,850,317
1872	20,032,094				76,151,218
1873	31,605,196				79,170,558
1874	36,036,537				101,755,631
1875	48,243,251				65,461,619
1876	36,590,150				72,432,775
1877	39,155,153	49,210,990			91,472,803
1878	38,831,379	54,046,771			85,505,919
1879	36,950,563	54,025,832			99,963,752
1880	45,237,472	84,717,194			110,767,627
1881	40,998,649	106,094,812			96,400,872
1882	45,899,737	69,586,466			50,474,210
1883	41,680,623	81,064,373			38,810,098
1884	42,379,911	120,784,064		641,163	63,091,103
1885	48,143,711	115,780,830		572,427	50,431,719
1886	58,903,870	99,423,962		824,955	40,919,951
1887	36,287,188	83,560,874	43,050,588	192,191	63,278,403
1888	48,980,269	93,498,273	40,458,375	83,151	92,483,032
1889	55,006,399	137,895,391	51,025,254	194,036	77,844,555
1890	97,508,419	173,237,596	82,638,507	192,110	112,745,370
1891	90,286,979	194,045,638	109,585,727	1,621,833	111,689,251

VALUE.

Years.	Beef products.				
	Salted or cured.	Fresh.	Canned.	Other, cured.	Tallow.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1870	1,939,778				3,814,861
1871	3,825,666				3,025,035
1872	1,870,820				6,973,189
1873	2,447,481				7,068,471
1874	2,956,676				8,135,820
1875	4,197,956				5,692,203
1876	3,180,304				6,734,378
1877	2,960,952	4,552,523			7,883,616
1878	2,973,234	5,003,856			6,695,377
1879	2,330,378	4,883,080			6,934,940
1880	2,881,047	7,441,918			7,689,232
1881	2,665,701	9,860,284			6,800,628
1882	3,902,556	6,768,841			4,015,798
1883	3,742,282	8,342,131			3,248,749
1884	3,202,275	11,987,331	3,173,767		4,793,375
1885	3,619,145	11,199,481	4,214,791	67,758	3,322,476
1886	3,544,379	9,291,011	3,436,453	89,503	2,144,499
1887	1,072,246	7,228,412	3,462,982	17,942	2,836,300
1888	2,008,479	8,231,281	3,339,077	8,579	4,252,053
1889	3,013,324	11,481,861	4,375,213	17,819	3,942,024
1890	5,250,068	12,862,384	6,787,193	9,223	5,242,158
1891	5,048,788	15,322,054	9,068,906	147,518	5,501,049

PAPERS ACCOMPANYING THE

Exports of live animals.

Years.	Cattle.		Sheep.		Hogs.	
	Number.	Value.	Number.	Value.	Number.	Value.
1870.....	27,530	\$439,987	39,570	\$95,193	12,058	\$148,72
1871.....	29,530	403,491	45,465	80,888	8,770	61,28
1872.....	28,033	565,719	35,218	79,592	56,110	548,15
1873.....	35,455	695,957	60,717	107,098	99,720	757,92
1874.....	56,067	1,150,857	124,248	159,735	158,581	1,625,87
1875.....	57,211	1,103,085	124,415	183,898	64,979	739,23
1876.....	51,593	1,110,703	110,312	171,101	68,044	670,92
1877.....	50,001	1,533,080	179,017	234,460	65,107	688,19
1878.....	80,040	3,896,818	183,985	333,499	29,284	267,29
1879.....	130,720	8,379,200	215,680	1,082,938	75,129	709,52
1880.....	182,756	13,744,195	209,137	802,647	83,454	421,00
1881.....	185,707	14,304,103	179,019	762,932	77,456	572,13
1882.....	198,110	7,800,227	139,676	603,778	36,968	509,63
1883.....	104,444	8,341,431	337,251	1,154,556	16,129	272,57
1884.....	190,518	17,855,495	273,874	850,146	46,382	627,69
1885.....	135,890	12,906,690	234,509	512,508	55,025	579,19
1886.....	119,065	10,958,954	177,594	320,844	74,187	674,20
1887.....	106,459	9,172,136	121,701	254,725	75,383	564,53
1888.....	140,208	11,577,578	143,817	280,490	23,755	193,07
1889.....	205,786	16,610,917	128,852	366,181	45,128	556,78
1890.....	394,836	31,261,131	67,521	243,077	91,148	908,02
1891.....	374,679	30,445,249	60,947	261,109	95,654	1,146,69

Exports of pork products.

QUANTITY.

Years.	Bacon and hams.	Pork, salted.	Pork, fresh.	Lard.
	Pounds.	Pounds.	Pounds.	Pounds.
1870.....	38,968,256	24,039,831	.....	35,808,520
1871.....	71,440,854	30,250,750	.....	80,037,597
1872.....	240,208,143	57,169,518	.....	199,651,600
1873.....	395,381,737	64,147,461	.....	230,534,507
1874.....	347,405,405	70,482,379	.....	305,527,471
1875.....	250,286,549	56,152,331	.....	166,899,383
1876.....	327,730,172	54,195,118	.....	168,405,828
1877.....	460,057,146	69,671,894	.....	234,741,233
1878.....	592,814,351	71,880,255	.....	342,667,920
1879.....	732,249,576	81,401,076	.....	326,658,646
1880.....	759,773,109	95,949,780	.....	374,979,286
1881.....	746,944,515	107,928,086	.....	378,142,496
1882.....	468,026,040	89,447,466	.....	250,367,740
1883.....	340,258,670	62,116,302	.....	224,718,474
1884.....	389,499,368	60,363,313	185,417	265,094,719
1885.....	490,127,119	71,649,365	424,103	283,216,359
1886.....	419,788,796	87,196,966	70,749	293,728,019
1887.....	419,922,955	85,869,367	23,930	321,533,746
1888.....	375,439,683	58,836,866	63,187	297,740,007
1889.....	400,224,646	64,110,845	22,794	318,242,990
1890.....	608,490,056	79,788,888	279,463	471,083,598
1891.....	599,085,665	81,317,364	818,875	498,343,927

VALUE.

Years.	Bacon and hams.	Pork, salted.	Pork, fresh.	Lard.
1870.....	\$6,123,114	\$3,253,137	.....	\$5,933,397
1871.....	8,126,683	4,302,320	.....	10,563,020
1872.....	21,126,592	4,122,308	.....	20,177,619
1873.....	35,022,137	5,007,035	.....	21,245,815
1874.....	33,383,908	5,808,712	.....	19,308,019
1875.....	28,612,613	5,671,495	.....	22,900,522
1876.....	39,664,456	5,744,022	.....	22,429,485
1877.....	49,512,412	6,206,414	.....	25,562,665
1878.....	51,752,068	4,913,657	.....	30,014,254
1879.....	51,074,133	4,807,568	.....	22,856,673
1880.....	50,987,623	5,930,252	.....	27,920,367
1881.....	61,161,205	8,272,285	.....	35,226,575
1882.....	46,675,774	7,201,270	.....	28,975,902
1883.....	38,155,952	6,192,268	.....	26,618,048
1884.....	39,681,845	4,749,658	\$13,057	25,305,953
1885.....	37,083,918	5,177,116	26,807	22,595,219
1886.....	31,640,211	5,119,426	3,985	20,361,786
1887.....	33,314,670	5,640,094	1,233	22,703,921
1888.....	32,175,633	4,368,001	4,423	22,751,105
1889.....	34,651,847	4,738,415	1,662	27,329,173
1890.....	47,056,760	4,753,488	15,406	33,455,520
1891.....	45,650,674	4,787,343	56,358	34,414,323

AGRICULTURAL EXPORTS AND IMPORTS.

EXPORTS.

Articles.	1890.		1891.	
	Quantities.	Value.	Quantities.	Value.
Animals, living:				
Cattle.....number..	394,836	\$31,261,131	374,679	\$30,445,249
Hogs.....do.....	91,148	909,042	95,654	1,146,630
Horses.....do.....	3,501	680,410	3,110	784,908
Mules.....do.....	3,514	447,108	2,184	278,658
Sheep.....do.....	67,521	243,077	60,947	261,109
All other, and fowls.....		97,360		18,532
Animal matter:				
Bones, hoofs, horns, and horn tips, strips, and waste.....		271,533		335,710
Casings for sausages.....		697,772		841,075
Eggs.....dozen.....	380,884	58,675	363,116	64,250
Glue.....pounds.....	728,606	88,484	986,552	110,292
Grease, grease scraps, and all soap stock.....		1,506,819		2,038,686
Hair, and manufactures of.....		344,558		394,544
Hides and skins other than furs.....		1,828,635		1,333,655
Honey.....		113,101		83,325
Oils:				
Lard.....gallons.....	1,214,611	663,343	1,092,448	562,086
Other animal.....do.....	727,732	457,926	512,253	317,594
Meat products—				
Beef products—				
Beef, canned.....pounds.....	82,638,507	6,787,103	109,585,727	9,068,906
Beef, fresh.....do.....	173,237,596	12,862,384	194,045,638	15,322,054
Beef, salted or pickled.....do.....	97,508,419	5,250,068	90,284,979	5,048,788
Beef, other, cured.....do.....	102,110	9,223	1,621,863	147,518
Tallow.....do.....	112,745,370	5,242,158	111,680,251	5,501,040
Mutton.....do.....	256,711	21,793	199,395	18,950
Oleomargarine—				
Imitation butter.....pounds.....	2,535,926	297,264	1,968,743	255,024
The oil.....do.....	68,278,098	6,476,258	80,231,035	7,859,130
Pork products—				
Bacon.....pounds.....	531,899,677	39,149,035	514,675,557	37,404,069
Hams.....do.....	76,591,279	7,907,125	84,410,108	8,245,685
Pork, fresh.....do.....	279,463	15,406	818,875	56,358
Pork, salted or cured.....do.....	79,788,868	4,753,488	81,317,364	4,787,343
Lard.....do.....	471,083,598	33,455,520	498,343,927	34,414,323
Poultry and game		23,365		15,808
All other meat products.....		931,770		1,007,757
Dairy products—				
Butter.....pounds.....	29,748,042	4,187,489	15,187,114	2,197,106
Cheese.....do.....	95,376,053	8,591,042	82,133,876	7,405,376
Milk.....		303,325		261,298
Wax, bees'.....pounds.....	171,391	19,727	120,548	30,027
Wool, raw.....do.....	231,042	33,543	291,922	39,423
Total value of animals and animal matter.....		175,986,750		178,104,333
Bread and breadstuffs:				
Barley.....bushels.....	1,048,311	754,605	973,062	669,203
Bread and biscuits.....pounds.....	15,035,540	766,476	15,541,655	838,848
Corn.....bushels.....	101,973,717	42,658,015	90,768,213	17,652,687
Cornmeal.....barrels.....	361,248	896,879	318,329	946,977
Oats.....bushels.....	13,692,776	4,510,055	953,010	405,708
Oatmeal.....pounds.....	25,460,322	784,879	7,736,873	221,316
Rye.....bushels.....	2,257,377	1,279,814	332,739	212,161
Rye flour.....barrels.....	3,933	13,782	4,254	18,185
Wheat.....bushels.....	54,887,767	45,275,906	55,131,948	51,420,272
Wheat flour.....barrels.....	12,231,711	57,036,168	11,344,301	54,705,616
All other breadstuffs and preparations of, used as food.....		949,348		1,030,683
Total value of bread and breadstuffs.....		154,925,927		128,121,656
Cotton and cotton-seed oil:				
Cotton—				
Sea island.....pounds.....	9,220,819	2,280,717	14,588,092	3,062,968
Other unmanufactured.....do.....	2,462,579,034	248,688,075	2,892,770,703	287,649,930
Cotton-seed oil.....gallons.....	13,384,385	5,201,178	11,003,160	3,975,305
Total value of cotton and cotton-seed oil.....		256,250,970		294,688,203

EXPORTS—Continued.

Articles.	1890.		1891.	
	Quantities.	Value.	Quantities.	Value.
Miscellaneous:				
Broom corn.....		\$111,147		\$172.12
Fruits and nuts—				
Apples, dried..... pounds..	20,861,462	1,038,682	6,973,168	408.06
Apples, green or ripe..... barrels..	435,506	1,231,436	135,207	473.65
Fruits, preserved—				
Canned.....		608,321		781.50
Other.....		59,401		91.06
All other, green, ripe, or dried.....		1,003,840		606.78
Nuts.....		27,861		36.67
Hay..... tons..	36,274	567,558	28,066	473.22
Hops..... pounds..	7,540,854	1,110,571	8,736,080	2,327.60
Oil cake and oil-cake meal..... do.....	711,704,373	7,999,926	633,344,851	7,432.04
Oils—				
Linseed..... gallons..	80,288	55,036	76,789	48.55
Other vegetable.....		102,792		81.49
Rice..... pounds..	388,914	20,728	540,620	33.02
Seeds—				
Clover..... do.....	26,500,578	1,762,034	20,773,884	1,553.02
Cotton..... do.....	7,660,001	74,575	10,108,014	85.35
Flax seed or linseed..... bushels..	14,678	19,792	144,848	184.54
Timothy..... pounds..	11,051,053	473,770	8,757,768	378.13
All other.....		307,717		265.80
Tobacco—				
Leaf..... pounds..	244,343,740	21,149,809	236,969,529	20,710.91
Stems and trimmings..... do.....	11,303,286	329,687	12,203,016	322.83
Vegetables—				
Onions..... bushels..	80,275	72,760	57,182	78.53
Peas and beans..... do.....	261,212	558,317	251,063	473.06
Potatoes..... do.....	406,618	269,093	341,189	316.42
Canned.....		231,265		286.21
All other, including pickles.....		225,060		180.17
Wine—				
In bottles..... dozen..	7,281	32,350	11,409	51.32
Not in bottles..... gallons..	303,323	238,580	543,292	319.06
All other agricultural products.....		271,235		251.39
Total value of miscellaneous products.....		40,044,009		38,524.97

RECAPITULATION.

Animals and animal matter.....	175,986,750	178,104,330
Bread and breadstuffs.....	154,925,927	128,121,656
Cotton and cotton-seed oil.....	258,259,970	294,688,233
Miscellaneous products.....	40,044,009	38,524,907
Total agricultural exports.....	627,216,656	639,439,099
Total exports.....	845,293,828	872,270,283
Per cent of agricultural matter.....	74.2	73.2

IMPORTS.

Articles.	1889.	1890.	1891.
Sugar and molasses:			
Sugar.....	\$88,543,971	\$96,094,532	\$105,728,216
Molasses.....	4,753,897	5,168,795	2,659,776
Sugar drainings.....	4,026	3,399	1,349
Total sugar and molasses.....	93,301,894	101,266,726	108,389,341
Tea, coffee, and cocoa:			
Tea.....	12,654,640	12,317,493	13,828,896
Coffee.....	74,724,882	78,267,432	96,122,777
Cocoa and leaves and shells of.....	2,328,262	2,713,166	3,223,057
Unenumerated items.....	151,538	150,546	97,794
Total tea, coffee, and cocoa.....	89,859,322	93,454,637	113,373,621

IMPORTS—Continued.

Articles.	1889.	1890.	1891.
Animals and their products, except wool:			
Cattle	\$703,469	\$214,747	\$102,978
Horses	4,868,862	4,840,485	3,265,251
Sheep	1,259,000	1,268,209	1,219,206
All other, and fowls	302,712	413,491	357,927
Bristles	1,284,724	1,286,219	1,337,938
Butter	24,577	13,679	58,541
Cheese	1,135,184	1,295,506	1,358,752
Eggs	2,418,976	2,074,012	1,185,595
Glue	454,460	471,829	497,349
Grease	212,198	264,080	430,335
Hair	2,585,941	3,026,566	2,408,733
Hides	25,127,750	21,881,886	27,939,759
Hide cuttings, etc.	232,251	348,440	353,943
Hoofs, horns, etc.	303,575	236,048	587,444
Meats—			
Preserved	329,411	407,038	521,322
All other	277,131	272,199	144,049
Milk	91,161	102,954	105,633
Oil, animal	3,677	6,471	5,531
Sausage skins	377,750	494,958	572,817
Unenumerated	797,061	743,590	813,873
Total animals and their products, except wool	42,879,870	39,693,916	43,277,970
Fibers:			
Animal—			
Wools	17,974,515	15,264,083	18,231,372
Silk, unmanufactured	19,333,220	24,331,867	19,086,436
Vegetable—			
Cotton	1,194,505	1,392,728	2,825,904
Flax	2,070,729	2,188,021	1,656,779
Hemp and all substitutes	9,433,774	7,311,956	7,949,659
Jute	2,853,064	3,249,926	3,862,838
Sisal grass and other vegetable substances	6,110,308	7,064,184	5,829,514
Fibers not elsewhere specified	483,212	607,680	1,987,904
Total fibers	59,453,936	61,530,445	61,429,517
Miscellaneous:			
Breadstuffs—			
Barley	7,723,838	5,629,849	3,222,593
Corn	1,216	908	1,651
Oats	10,178	8,950	5,056
Oatmeal	50,002	59,300	31,089
Rye	24	115,657	98,227
Wheat	119,017	112,303	431,940
Wheat flour	5,792	5,049	43,180
Breadstuffs and farinaceous substances not elsewhere specified	1,055,655	1,210,982	1,194,473
Chicory	216,573	209,283	342,517
Fruits and nuts	18,740,417	20,747,774	26,015,374
Hay	1,082,885	1,143,445	445,461
Hops	1,155,472	1,033,616	1,797,406
Indigo	2,684,105	1,827,937	1,600,630
Malt, barley	111,381	161,666	78,433
Oils, vegetable:			
Fixed or expressed—			
Olive	696,065	819,110	733,489
Other	1,108,854	1,340,551	1,465,001
Volatile or essential	1,183,005	1,061,631	1,523,491
Opium, crude	809,893	1,183,712	1,202,375
Plants, trees, and shrubs	325,331	343,226	189,763
Rice and rice meal	3,409,437	2,540,674	4,559,540
Seeds	5,097,223	4,089,814	3,266,230
Spices:			
Ground	173,668	249,077	262,682
Unground—			
Nutmegs	514,888	534,340	686,019
Pepper	1,578,421	1,619,215	1,338,637
All other	890,889	826,397	865,882
Tobacco, leaf	10,868,226	17,605,192	13,287,094
Vanilla beans	699,903	559,867	594,744
Vegetables:			
Beans and peas	786,343	1,307,702	2,078,571
Potatoes	321,106	1,365,898	2,797,927
Pickles and sauces	349,422	380,307	511,163
All other—			
In their natural state, or in salt or brine	431,227	896,028	1,067,757
Prepared or preserved	389,894	510,077	668,519

IMPORTS—Continued.

Articles.	1889.	1890.	1891.
Miscellaneous—Continued.			
Wines:			
Champagne and other sparkling.....	\$4,254,413	\$4,752,572	\$5,615.62
Still wines—			
In casks.....	2,128,548	2,450,174	2,641.98
In bottles.....	1,325,811	1,657,210	1,789.22
Unenumerated items.....	156,486	161,528	177.32
Total miscellaneous.....	70,555,518	78,547,021	82,561.66
RECAPITULATION.			
Sugar and molasses.....	93,301,894	101,266,726	108,280.30
Tea, coffee, and cocoa.....	89,859,322	93,454,637	113,273.60
Animals and their products, except wool.....	42,879,870	39,093,916	43,277.90
Fibers, animal and vegetable.....	59,453,936	61,530,445	61,429.57
Miscellaneous.....	70,555,518	78,547,021	82,561.66
Total agricultural.....	356,050,540	374,492,745	400,061.96
Total imports.....	745,131,652	789,310,409	844,916.18
Per cent of agricultural matter.....	47.8	47.4	48.4

FOREIGN TARIFFS ON FARM PRODUCTS.

Farm products and primary manufactures therefrom are the principal items of our exports to foreign countries. The proportion of agricultural products in our total exports averages about 72 to 75 per cent each year, while almost one-half of our imports are of farm products.

Import duties are collected by all countries on the foreign produce which they purchase, varying as the products come into competition with their own agriculture. There are no absolute exceptions to this rule, though some have a larger free list than others. For purposes of comparison, the import duties in this country upon the principal farm products are given, together with similar duties in other countries. Under the present tariff the duties charged in this country are as follows:

Articles.	Duty.	Articles.	Duty.
Live animals:		Provisions—Continued.	
For breeding.....	Free.	Rice, cleaned..... per pound.....	\$0.02
Horses and mules..... each.....	\$30.00	Rice, uncleaned..... do.....	.0125
Horses and mules, if valued at \$150		Tobacco, leaf for cigar wrappers:	
and over.....	()	Stemmed..... do.....	2.00
Cattle more than 1 year old..... each.....	10.00	Unstemmed..... do.....	2.75
Cattle less than 1 year old..... do.....	2.00	Raisins..... do.....	0.25
Hogs..... do.....	1.50	Wool:	
Sheep 1 year old..... do.....	1.50	Class 1..... do.....	0.11
Sheep less than 1 year old..... do.....	.75	Class 2..... do.....	0.12
Breadstuffs:		Class 3.....	
Barley..... per bushel.....	.30	Valued at 13 cents or less.....	()
Corn..... do.....	.15	Valued at more than 13 cents.....	()
Rye..... do.....	.10	Coffee.....	Free.
Wheat..... do.....	.25	Cotton.....	Free.
Provisions:		Hides.....	Free.
Bacon and hams..... per pound.....	.05	Jute and jute butts.....	Free.
Beef, mutton, pork, and lard..... do.....	.02	Sugar:	
Butter and cheese..... do.....	.06	Above No. 16 Dutch standard, per	
Eggs..... per dozen.....	.05	pound.....	0.05
Potatoes..... per bushel.....	.25	All other.....	Free.

* Ad valorem, 30 per cent.

† Ad valorem, 32 per cent.

‡ Ad valorem, 50 per cent.

Similar duties are levied in the principal European countries, as compiled from recent consular returns, as follows:

[100 kilos=220.4 pounds.]

Articles.	Duty.	Articles.	Duty.
<i>Austria-Hungary.</i>		<i>France—Continued.</i>	
Live animals:		Tobacco (Government monopoly).....	Free.
Oxen..... per head..	\$7. 20	Vegetables:	
Steers..... do..	1. 92	Green.....	Free.
Hogs..... do..	1. 44	Preserved..... per 100 kilos..	\$0. 58
Sheep..... do..	. 24		
Breadstuffs:		<i>Germany.</i>	
Barley and oats..... per 100 kilos..	. 36	Live animals:	
Indian corn..... do..	. 24	Horses..... each..	4. 76
Rye, wheat, and malt..... do..	. 72	Oxen..... do..	7. 14
Flour..... do..	1. 80	Sheep..... do..	. 24
Provisions:		Breadstuffs:	
Meats of all kinds..... do..	2. 88	Wheat and rye..... per 100 kilos..	1. 19
Lard..... do..	7. 60	Oats..... do..	. 95
Butter..... do..	4. 80	Flour and corn meal..... do..	2. 50
Cheese..... do..	9. 60	Buckwheat..... do..	. 48
Tobacco, leaf..... do..	10. 68	Barley..... do..	. 54
Vegetables, canned..... do..	19. 20	Maize..... do..	. 48
		Malt..... do..	. 95
<i>Belgium.</i>		Provisions:	
Live animals:		Butter and cheese..... do..	4. 76
Bulls and bull calves..... per kilo..	. 001	Meat, fresh and prepared..... do..	4. 76
Oxen and bullocks..... do..	. 01	Fowl and game..... do..	7. 10
Sheep..... per head..	. 48	Tobacco, leaf..... do..	20. 23
Breadstuffs.....	Free.	Sugar, cane..... do..	7. 14
Provisions:			
Fresh meat (whole or half carcasses)		<i>Holland.</i>	
..... per kilo..	. 03	Meats:	
All other meats, salted, smoked, etc..	Free.	Bacon, pork, and mutton—	
Lard, butter, and cheese.....	Free.	Salted.....	Free.
Tobacco, leaf..... per 100 kilos..	13. 50	Dried, smoked, etc. per 100 kilos..	. 40
Vegetables.....	Free.	Other than above—	
<i>Denmark.</i>		Salted..... do..	2. 41
Live animals.....	Free.	Dried, etc..... do..	3. 21
Breadstuffs.....	Free.	Fruit:	
Provisions:		Fresh.....	(*)
Meats—		Canned..... per 100 kilos..	7. 24
All sorts, except canned.....	Free.	Live animals.....	Free.
Canned..... per 100 pounds..	4. 00	Cereals.....	Free.
Lard and butter.....	Free.		
Oleomargarine..... per 100 pounds..	1. 70	<i>Italy.</i>	
Cheese..... do..	2. 78	Animals:	
Tobacco:		Oxen..... per head..	7. 33
Leaves and stems..... do..	4. 00	Sheep..... do..	. 57
Smoking, chewing, etc..... do..	5. 60	Horses.....	Free.
Vegetables:		Breadstuffs:	
Preserved in vinegar or salted..... do..	. 57	Oats..... per 100 kilos..	. 77
In cans..... do..	4. 00	Rye..... per ton..	2. 21
		Wheat..... do..	9. 66
<i>France.</i>		Barley..... do..	2. 21
Live animals:		Indian corn..... do..	2. 21
Oxen..... per head..	7. 33	Flour..... per 100 kilos..	1. 68
Cows..... do..	3. 86	Fruit:	
Sheep..... do..	. 96	In sugar, etc..... do..	19. 30
Hogs..... do..	. 19	In own juices..... do..	3. 86
Breadstuffs:		Provisions:	
Wheat..... per 100 kilos..	. 97	Meats—	
Flour..... do..	1. 54	Fresh..... do..	2. 31
Barley..... do..	. 29	Salted, smoked, etc..... do..	4. 83
Rye..... do..	. 58	Lard..... do..	1. 93
Indian corn.....	Free.	Butter—	
Provisions:		Fresh..... per 100 kilos..	2. 31
Meat—		Salted..... do..	3. 38
Fresh..... per 100 kilos..	2. 32	Cheese..... do..	2. 31
Salted..... do..	1. 64	Poultry..... do..	. 96
Canned..... do..	1. 54		
Extracts..... do..	. 77	<i>Portugal.</i>	
Cheese—		Wheat..... per 100 kilos..	1. 72
Soft..... per 100 kilos..	\$1. 16	Flour..... do..	2. 46
Hard..... do..	1. 54	Other cereals..... do..	1. 51
Butter—		Cattle..... per head..	2. 70
Fresh..... do..	2. 50	Hogs..... do..	1. 64
Salted..... do..	2. 90	Horses.....	
Lard.....	Free.		

*5 per cent.

†2 per cent.

[100 kilos = 220.4 pounds.]

Articles.	Duty.	Articles.	Duty.
<i>Portugal—Continued.</i>		<i>Spain—Continued.</i>	
Butter.....per kilo..	\$0.20	Salted and dried meats....per 100 kilos..	\$2.25
Lard.....do.....	.11	Pork, lard, bacon, and hams.....do.....	1.00
Cheese.....do.....	.21	Other meats.....do.....	1.40
Beef:		Rice:	
Dry.....do.....	.034	Cleaned.....do.....	2.40
Other.....do.....	.11	Uncleaned.....do.....	1.40
<i>Russia.</i>		Wheat.....do.....	1.50
Flour.....per 36 pounds.....	.60	Flour:	
Starch.....do.....	.60	Wheat.....do.....	2.50
Rice:		Other.....do.....	1.20
Cleaned.....do.....	.424	Tobacco, in leaf.....per kilo..	2.10
Uncleaned.....do.....	.25	<i>Sweden.</i>	
Meats.....do.....	.474	Cattle.....per head.....	1.50
Cheese.....do.....	3.00	Sheep.....do.....	.75
Butter and lard.....per 36 pounds.....	0.25	Meats.....per 100 kilos.....	.60
Live animals.....	Free.	Butter.....do.....	2.20
<i>Spain.*</i>		Lard.....do.....	2.20
Cattle.....per head.....	7.72	Cheese.....do.....	1.20
Swine.....do.....	3.86	Barley, rye, and wheat.....do.....	.60
Sheep.....do.....	.46	Flour.....do.....	1.15
		Indian meal.....do.....	2.10
		Oats.....do.....	2.00

* All food imports are subject, also, to "transit and consumo duties."

The tariff rate in Turkey is 8 per cent ad valorem; American pork is prohibited.

In addition to the countries mentioned above, the following statement covering the import duties upon agricultural products in Switzerland, compiled from the returns published by the international customs tariffs bureau at Brussels, is presented, and includes the tariff laws of 1884 and 1887. In the case of many articles the duties under treaty stipulations with other countries are levied instead of the duties fixed by the tariff acts. In such cases the duty given below is the duty under such special treaties:

Articles.	Duty per 100 kilograms.	Articles.	Duty per 100 kilograms.
Lard.....	\$0.58	Tobacco, leaves, not manufactured....	\$4.80
Butter.....	1.35	Horses and mules.....	.75
Eggs.....	.10	Colts and asses.....	.19
Butchers' meat, fresh.....	.58	Oxen and bulls.....	2.90
Meat, salted, smoked, etc., and bacon.....	.77	Cows and heifers.....	2.50
Pork, butchers' meat (sausage, etc.).....	2.32	Young cattle.....	.90
Potatoes.....	Free.	Calves.....	.50
Cereals, cleaned, crushed, etc., and flour of cereals.....	.39	Swine weighing 25 kilograms.....	.90
Cheese.....	.77	Swine weighing less than 25 kilograms.....	.50

A similar compilation of duties imposed in a number of the leading countries of the American continent is also presented:

Articles.	Duty.	Articles.	Duty.
<i>Mexico.*</i>		<i>Mexico—Continued.</i>	
Live animals:		Broadstuffs:	
Cattle.....each.....	\$32.	Corn, gross weight.....per pound.....	\$0.04
Horses, other.....do.....	24.	Oats, gross weight.....do.....	.04
Mules.....do.....	4.	Wheat and other cereals, gross weight.....per pound.....	.018
Cattle.....per pound.....	.011	Flour, legal weight.....do.....	.06
Swine.....do.....	.011		
Sheep and goats.....each.....	1.20		

* Reductions to English equivalents on basis of 80 cents per peso. Net weight means weight of the merchandise without coverings. Legal weight means weight of the goods, including interior wrappings. Gross weight means weight of the merchandise with all interior wrappings, outside cases, and packings.

Articles.	Duty.	Articles.	Duty.
<i>Mexico—Continued.</i>		<i>Costa Rica—Continued.</i>	
Provisions:		Provisions—Continued.	
Meats—		Butter..... per pound..	\$0.013
Fresh..... per pound..	\$0.036	Cheese..... do.....	.023
Smoked or salted, and hams, legal weight..... per pound..	.073	Hams, in tins or otherwise..... do.....	.023
Preserved, legal weight..... do.....	.055	Lard..... do.....	.013
Butter, legal weight..... do.....	.073	Meats:	
Cheese, legal weight..... do.....	.043	All kinds, smoked, dried, or in tins..... per pound..	.013
Eggs.....	Free.	Preserved, potted, etc..... do.....	.023
Lard, net weight..... per pound..	.073	Potatoes..... do.....	.007
Milk.....	Free.	Hay..... do.....	.007
Tobacco, leaf:		Rice..... do.....	.023
Not Virginia, net weight, per pound..	.498	Vegetables, fresh..... do.....	.007
Virginia, net weight..... do.....	.091	Hides and skins..... do.....	.023
Wool, in fleece, net weight..... do.....	.036	Sheepskins, dressed..... do.....	.037
<i>Nicaragua.*</i>		Cotton, raw..... do.....	.013
Live animals.....	Free.	Wool, raw..... do.....	.037
Provisions:		<i>Ecuador.†</i>	
Meats—		Live animals.....	Free.
Dried, smoked, or salted,..... per pound..	.022	Breadstuffs:	
In brine in barrels..... do.....	.014	Barley, corn, and wheat..... per pound..	.0067
Preserved, including hams..... do.....	.059	Flour..... do.....	.0167
Bacon and salt pork..... do.....	.029	Provisions:	
Butter and cheese..... do.....	.059	Butter..... per pound..	.0334
Lard..... do.....	.037	Hams and salt meats..... do.....	.0167
Cotton, raw..... do.....	.022	Sausages..... do.....	.1669
Flour..... do.....	.007	Lard..... do.....	.0334
Wool..... do.....	.074	Eggs.....	Free.
<i>Honduras.‡</i>		Potatoes..... per pound..	.0033
Live animals.....	Free.	Cotton, raw..... do.....	.0167
Breadstuffs:		Hides..... do.....	.0033
Oats.....	Free.	Rice..... do.....	.0033
Flour.....	Free.	Tobacco, leaf..... do.....	.3338
Rice.....	Free.	<i>Colombia.</i>	
Provisions:		Animals, live.....	Free.
Meats, and bacon not canned,..... per pound..	.0145	Hides and furs, unmanufactured,..... per pound..	.067
Hams..... do.....	.029	Meats, smoked and pickled..... do.....	.067
Butter and cheese..... do.....	.029	Wool, raw..... do.....	.017
Lard..... do.....	.0145	Flour..... do.....	.017
Tallow..... do.....	.0145	Potatoes, rice, fresh vegetables, and fruit..... per pound..	.003
Flax..... do.....	.3625	Tobacco, leaf..... do.....	.033
Tobacco, leaf..... do.....	.029	<i>Argentine Republic.</i>	
Wool..... do.....		Breadstuffs:	
<i>Costa Rica.‡</i>		Corn..... per pound..	.02189
Breadstuffs:		Flour and meal..... do.....	.02189
All cereals..... per pound..	.007	Cotton, raw.....	Free
Flour..... do.....	.013	Rice.....	||
Provisions:		Tobacco, not Havana..... per pound..	¶ .44
Bacon, in tins or otherwise, per pound..	.023		

*Duties are on gross weight. Reductions to English equivalents at the rate of 73.6 cents per peso.

†Reductions to English equivalents on basis of 72.3 cents per peso.

‡Reductions to English equivalents on basis of 73.6 cents per peso.

§Reduction to English equivalents on basis of 73.6 cents per peso. In addition, extra duties amounting to 30 per cent are charged on duties expressed.

|| Fifteen per cent ad valorem.

¶ And 60 per cent ad valorem.

DUTIES UNDER RECIPROCITY TREATIES.

Section 3 of the tariff act approved October 1, 1890, under which our duties are now levied, provided that, with a view to securing reciprocal trade with countries producing tea, coffee, sugar, molasses, and hides, raw and uncured, the President shall, when he shall be satisfied that the government of any country producing these articles imposes duties or other exactions upon products from the United States which, in view of the free introduction of sugar, molasses, coffee, tea, and hides into this country, shall be deemed reciprocally unequal and unreasonable, suspend the provisions of the tariff act allowing such free introduction of these articles, and during such suspension certain duties provided shall be levied, collected, and paid upon them.

BRAZIL.

Articles.	Value.	Articles.	Value.
Live animals:		Provisions—Continued.	
Horses.....	\$3,600	Lard.....	\$1,304,970
All other animals and fowls	429	Butter.....	20,841
Total.....	4,029	Cheese.....	288
		All other provisions.....	1,523
Breadstuffs:		Total.....	2,146,456
Bread and biscuit.....	9,796	Miscellaneous:	
Corn.....	8,451	Apples, green or ripe.....	6,555
Corn meal.....	92	Canned fruits.....	1,525
Wheat.....	501,297	Cotton-seed oil.....	20,102
Wheat flour.....	3,828,919	Tobacco leaf.....	4,807
All other breadstuffs.....	27,656	Beans (.....)	3,354
Total.....	4,386,121	Peas (.....)	65
		Potatoes.....	65
Provisions:		All other agricultural exports.....	85,919
Canned beef.....	3,112	Total agricultural exports.....	6,658,933
Salted beef.....	1,416	Total nonagricultural exports.....	7,390,340
Tallow.....	6,215		
Bacon.....	801,785	Total exports.....	14,049,273
Hams.....	1,557		
Pickled pork.....	4,559		

IMPORTS.

Articles.	Value.	Articles.	Value.
FREE OF DUTY.		DUTIABLE.	
Agricultural products:		Live animals, including live poultry.	\$625
Live animals	\$20	Fruits	140
Cocoa, crude, and leaves and shells of	502,547	Provisions, comprising meat and dairy products	10
Coffee	62,022,022	Sugar and molasses	2,230,919
Fruits, including nuts	282,847	Tobacco, leaf	2
Hair, not elsewhere specified	178,544	Wool, raw	17,909
Hides and skins, other than fur skins	2,515,344	All other agricultural products	995
Sugar and molasses	2,860,204	Total agricultural imports dutiable	2,300,600
All other agricultural imports	13,659	Total nonagricultural imports dutiable	42,551
Total agricultural imports free	68,375,187	Total imports dutiable	2,343,151
Nonagricultural imports free	12,512,257	Total imports free	80,887,444
Total imports free of duty	80,887,444	Grand total of imports	83,230,595

A glance at this computation is sufficient to show the one-sided character of our trade with this country. While buying Brazilian products to the extent of \$83,230,595, we sold to that country only \$14,049,273. In other words, out of our total trade with that country our purchases constituted 86 per cent and our sales only 14 per cent. An adverse balance of trade is to be expected where our dealings are with a country which largely supplies the world with a staple article of consumption like coffee and which at the same time has neither the wealth nor the necessity for largely supplying itself with foreign products, but it is the duty of commercial and political wisdom to reduce the balance to as small a figure as possible.

An examination of the table in connection with the Brazilian customs tariff shows that our trade relations with that country have not been reciprocally fair, and the new treaty, that portion of which relating to agricultural products is presented above, shows what steps have been taken to correct the inequality. During 1891 we bought from Brazil agricultural products to the value of \$70,675,787 and sold her but \$6,658,933. Of our purchases, \$68,375,187 was admitted into our ports free of all duty, and of the \$2,000,000 dutiable all but \$20,000 was represented by sugar, which is now free. Practically, therefore, only \$20,000 of Brazilian products pay duty in our ports. At the same time we were charged heavy duties on almost every agricultural product we sold in the markets of that country. Our principal articles and the duty we paid were:

	Value.	Duty per pound.
		<i>Cents.</i>
Wheat flour	\$3,838,919	0.4
Bacon	801,785	3.0
Lard	1,304,970	4.9

By the new treaty flour will go in free and there will be a reduction from the regular duty of 25 per cent in the case of lard and bacon.

CUBA AND PUERTO RICO.

The Cuban tariff, corrected up to April 27, 1885, is presented. There should be added to the rates given below 25 per cent war duty and an

increase of 20 per cent. There is also a wharf duty of \$1 per 1,000 kilograms (2,204 pounds) gross weight.

Article.	Duty.	Article.	Duty.
Live animals:		Provisions—Continued.	
Animals for breeding	Free.	Butter, including weight of earthen or glass package	per cwt. \$4.75
Horses more than 63 inches high, each	\$67.135	Cheese, Spanish, Holland, and similar sorts	per cwt. 1.62
Horses less than 63 inches high, do.	26.854	British, Swiss, Italian, and similar sorts	per cwt. 7.92
Mules more than 58½ inches high, do.	32.225	United States and similar sorts	per cwt. 2.65
Mules less than 58½ inches high, do.	9.445	Eggs	do. 2.65
Cattle	3.334	Poultry	per pound. .05
Sheep, goats, etc.	do. .889	Lard	per cwt. 1.67
Hogs	per cwt. 2.185	Apples and other fruit, including weight of package when in glass jars	per cwt. 1.65
Breadstuffs:		Rice:	
Corn, rye, oats, and peanuts	do. .441	Clean	do. .819
Flour of rye and corn	do. .441	In hull	do. .380
Flour of wheat, including weight of package	per cwt. 1.97	Hides:	
Provisions:		Common, dried	do. 2.65
Bacon, salt pork, and dried meat	do. 2.625	Green	do. .882
Superior meats, as mutton, smoked tongue, etc.	per cwt. 6.342	Sheep and goat skins	do. 6.573
Pickled beef, including weight of pickle	per cwt. .756	Cotton:	
Pickled pork, including weight of pickle	per cwt. 1.26	Raw	do. 2.530
Sausage, stuffed meats, in lard and cans	per cwt. 6.30	Hemp and flax:	
Canned meats, including weight of cans	per cwt. 10.584	Raw	do. 1.65
Fresh meats	do. .609		

The tariff rates for Puerto Rico, given below, were increased 20 per cent July 1, 1890:

Articles.	Duty.	Articles.	Duty.
Live animals:		Provisions—Continued.	
Horses, mules, and asses	each. \$4.63	Butter	per cwt. .162
Cattle	do. 3.70	Cheese	per pound. .025
Swine	do. 1.667	Lard	per cwt. 1.478
Sheep and goats	do. .555	Cotton:	
Breadstuffs:		Raw	do. 2.10
Cereals	per cwt. .336	Hemp and flax:	
Flour of wheat	do. 1.025	Raw	do. .672
Flour of corn and other grains	do. .273	Grease	do. 1.68
Provisions:		Rice:	
Pork and bacon	do. 1.176	Hulled	do. .756
Salt and jerked meats, salt or in brine	per cwt. 1.092	Tobacco:	
		Leaf	per pound. .147
		Wool	per cwt. 5.510

The arrangement with Spain relative to the trade of Cuba and Puerto Rico provides that from September 1, 1891, to June 30, 1892, as a provisional measure, a number of our products shall be admitted free and others at greatly reduced rates. The treaty further provides that after July 1, 1892, the regulations shall be as follows:

Free of duty—Cotton, cotton seed, oil and meal cake of cotton; tallow and other animal greases unmanufactured; meats in brine salted and smoked, including bacon, hams, meats preserved in cans, in lard, or by extraction of air, jerked beef excepted; lard and butter; cheese, oats, rye, barley, and flour of these cereals; maizena and other corn products, except corn meal; fruits; fresh, dried, and preserved, except raisins; vegetables, and garden products, hay, straw for forage, bran, trees, plants, shrubs, and garden seeds.

Specific duties per 100 kilograms (220.4 pounds)—Corn and corn meal, 25 cents; wheat, 30 cents; wheat flour, \$1.00.

Reduction of 50 per cent—Preserved alimentary substances and canned goods not otherwise provided for, including sausages, stuffed meats, sauces, pickles, jams and jellies, and rice, hulled or unhulled.

Our trade with Cuba and Puerto Rico during 1891 is presented, showing in detail the principal items making up the aggregate imports and exports of agricultural products.

AGRICULTURAL EXPORTS.

Articles.	Value.	Articles.	Value.
Live animals:		Provisions—Continued.	
Horses.....	\$32,245	Pickled pork.....	\$250,626
Mules.....	7,935	Lard.....	2,317,226
Cattle.....	570	Butter.....	30,761
All other animals and fowls.....	2,427	Cheese.....	45,601
Total.....	43,177	All other provisions.....	67,996
Breadstuffs:		Total.....	3,421,339
Bread and biscuit.....	45,736	Miscellaneous:	
Corn.....	225,567	Apples, green or ripe.....	3,943
Corn meal.....	29,008	Canned fruits.....	11,692
Wheat.....	23	Cotton-seed oil.....	555
Wheat flour.....	1,260,714	Tobacco, leaf.....	1,590
All other breadstuffs.....	62,800	Beans.....	128,287
Total.....	1,623,854	Peas.....	170,090
Provisions:		Potatoes.....	115,726
Canned beef.....	891	All other agricultural exports.....	
Salted beef.....	6,598	Total agricultural exports.....	5,523,892
Tallow.....	3,026	Total nonagricultural exports..	8,518,077
Bacon.....	430,539	Total exports.....	14,041,939
Hams.....	202,075		

AGRICULTURAL IMPORTS.

Articles.	Value.	Articles.	Value.
FREE OF DUTY.		DUTIABLE.	
Agricultural products:		Live animals.....	\$1,581
Live animals.....	\$6,459	Fruits, including nuts.....	84,569
Cocoa, crude, and leaves and shells of.....	663	Provisions, comprising meat and dairy products.....	10,735
Coffee.....	41,628	Sugar and molasses.....	25,233,408
Fruits, including nuts.....	1,652,452	Leaf tobacco.....	7,141,465
Hair, not elsewhere specified.....	3,004	All other agricultural products.....	118,894
Hides and skins, other than fur skins.....	354,683	Total agricultural imports dutiable.....	32,500,652
Sugar and molasses.....	24,637,693	Total nonagricultural imports dutiable.....	4,386,396
All other agricultural imports.....	60,116	Total imports dutiable.....	36,877,048
Total agricultural imports free.....	26,776,704	Total imports free.....	27,901,457
Nonagricultural imports free.....	1,124,753	Grand total of imports.....	64,778,505
Total imports free of duty.....	27,901,457		

In our trade with Cuba and Puerto Rico in agricultural products we collected last year, outside of sugar, now free, duties on only \$7,357,244 worth of products, while giving a free market to products to the value of, including all sugar, \$52,010,112. Tobacco from Cuba was the only product of importance paying any duty. Practically we furnished a free market for the staple products of these countries. At the same time we paid duties on almost every item we sold in their markets.

Lard was the principal item exported, and in Cuba it paid a duty of \$3.07 per hundredweight; flour paid \$1.97 per hundredweight; bacon, \$2.63 per hundredweight; pickled pork, \$1.26 per hundredweight, and other products were burdened with similar heavy duties, in some cases intended to be prohibitory.

The following statement, in connection with the table of our exports will show the duty we have paid in Cuba and the advantage we secure under the new treaty:

	Old duty.	Duty under treaty.
Wheat flour per cwt.....	\$1. 97	80.50
Bacon and hams..... do.....	2. 625	Free.
Lard..... do.....	3. 07	Free.
Pickled pork..... do.....	1. 26	Free.

These four items, in spite of the heavy duties shown above, constituted 82 per cent of our exports of farm products to Cuba and Puerto Rico. With the exception of flour, which bears but a nominal rate, they are free under the new arrangement, and this country will undoubtedly monopolize the trade in these and other similar products.

DOMINICAN REPUBLIC.

The treaty with the Dominican Republic provides that the following articles shall be admitted free:

Animals, live; meats of all kinds, salted or in brine, but not smoked; corn or maize, corn meal and starch, oats, rye, and barley, and buckwheat, and flour of these cereals; hay, bran, and straw for forage; trees, plants, vines, seeds, and grains of all kinds for propagation; cotton-seed oil and oil-cake meal, tallow in cake or melted.

The following articles will be admitted at a reduction of 25 per cent from the regular duty:

Meats not otherwise provided for, and all meat products—excepting lard—butter, cheese, condensed or canned milk, fruits and vegetables fresh, canned, dried, pickled, or preserved.

Our trade with Santo Domingo for 1891 is presented.

AGRICULTURAL EXPORTS.

Article.	Value.	Article.	Value.
Live animals:		Provisions—Continued.	
Horses.....	\$1,150	Pickled pork.....	\$7,411
Mules.....		Lard.....	53,879
Cattle.....		Butter.....	21,130
All other animals and fowls.....		Cheese.....	7,130
Total.....	1,150	All other provisions.....	2,131
Breadstuffs:		Total.....	147,460
Bread and biscuit.....	3,979	Miscellaneous:	
Corn.....	64	Apples, green or ripe.....	377
Corn meal.....	2,088	Canned fruits.....	1,108
Wheat.....		Cotton-seed oil.....	840
Wheat flour.....	206,239	Tobacco, leaf.....	16
All other breadstuffs.....	9,631	Beans }.....	2,550
Total.....	222,001	Peas }.....	4,521
Provisions:		Potatoes.....	23,505
Canned beef.....	174	All other agricultural exports.....	
Salted beef.....	1,885	Total agricultural exports.....	403,528
Tallow.....	41,756	Total nonagricultural exports.....	583,298
Bacon.....	2,147	Total exports.....	986,826
Hams.....	9,817		

AGRICULTURAL IMPORTS.

Articles.	Value.	Articles.	Value.
FREE OF DUTY.		DUTIABLE.	
Agricultural products:		Sugar.....	\$593, 168
Cocoa, crude, and leaves and stems of.....	\$2, 002	Total agricultural imports dutiable.....	593, 168
Coffee.....	51, 972	Total nonagricultural imports dutiable.....	7, 502
Fruits, including nuts.....	3, 752	Total imports dutiable.....	600, 670
Hides and skins, other than fur skins.....	95, 503	Total imports free.....	1, 009, 690
Sugar.....	689, 463	Grand total of imports.....	1, 610, 360
All other agricultural products.....			
Total agricultural imports free.....	842, 692		
Total nonagricultural imports free.....	166, 998		
Total imports free of duty.....	1, 009, 690		

Our trade with the Dominican Republic amounted in 1891 to about \$2,600,000, nearly two-thirds of which was made up of imports, and almost one-half of imports of sugar. Wheat flour, tallow, lard, and butter made up the principal items of our agricultural exports, and on them all there was a heavy duty. With the exception of sugar, which is now free, not a single agricultural product imported from that country paid duty in our ports. We furnished a free market for everything, but in return were taxed on nearly everything we sold. The reciprocal arrangement entered into corrects this manifest unfairness. All kinds of salt meats, not smoked, will go free, as will tallow and a number of other products, while smoked meats, butter, and other items of considerable value will be admitted at a reduction of 25 per cent from the regular duty.

SAN SALVADOR.

The treaty negotiated with the Republic of Salvador provides that the following articles shall be admitted free of duties of any kind:

Animals for breeding purposes, corn, rice, barley, and rye, beans, hay and straw for forage, fresh fruits, and hops.

Our foreign trade with San Salvador in 1891 is shown.

AGRICULTURAL EXPORTS.

Articles.	Value.	Articles.	Value.
Live animals:		Provisions—Continued.	
Horses.....	\$2, 950	Pickled pork.....	\$794
Mules.....	900	Lard.....	202
Cattle.....	185	Butter.....	305
All other animals and fowls.....		Cheese.....	747
Total.....	4, 035	All other provisions.....	747
Breadstuffs:		Total.....	3, 502
Bread and biscuit.....	373	Miscellaneous:	
Corn.....	20, 696	Apples, green or ripe.....	794
Corn meal.....	83	Canned fruits.....	7, 864
Wheat.....	273, 162	Cotton-seed oil.....	1, 168
Wheat flour.....	3, 919	Tobacco, leaf.....	274
All other breadstuffs.....		Beans.....	
Total.....	298, 233	Peas.....	
Provisions:		Potatoes.....	3, 572
Canned beef.....	68	All other agricultural exports.....	31, 801
Salted beef.....		Total agricultural exports.....	351, 244
Tallow.....	832	Total nonagricultural exports.....	783, 751
Bacon.....		Total exports.....	1, 134, 995
Hams.....	554		

AGRICULTURAL IMPORTS.

Articles.	Value.	Articles.	Value.
FREE OF DUTY.		DUTIABLE.	
Agricultural products:		Sugar.....	\$49, 94
Coffee.....	\$1, 670, 869	Total agricultural imports du-	49, 94
Hides and skins, other than fur		tiable.....	
skins.....	13, 988	Total imports dutiable.....	49, 94
All other agricultural products.....	25, 104	Total imports free.....	1, 733, 222
Total agricultural imports free.	1, 709, 961	Grand total of imports.....	1, 783, 066
Total nonagricultural imports			
free.....	23, 261		
Total imports free of duty.....	1, 733, 222		

Our imports from San Salvador are made up almost entirely of two items, coffee and sugar. Agricultural exports are mainly breadstuffs. Coffee has been free of duty in this country since 1872, and hence the only concession Salvador receives is in the free admission of the small amount of sugar sent us. In return we are given a free market for animals for breeding purposes, a portion of the cereals, forage, fruits, and hops.

BRITISH GUIANA, ETC.

The treaty with the United Kingdom relative to the trade with British Guiana, Trinidad, and Tobago, Barbadoes, Leeward Islands, and Windward Islands, excepting the island of Granada, provides that the following articles shall be admitted free of duty:

Animals, including only asses, sheep, goats, hogs, poultry, and horses for breeding; beef, including tongues, smoked and dried; beef and pork preserved in cans; bones and horns; bran, middlings, and shorts; cotton seed and its products; eggs; fruits and vegetables, fresh and dried, when not canned, tinned, or bottled; hay and straw for forage; starch of Indian corn; trees, plants, vines, and seeds, and grains of all kinds for cultivation.

The following articles will be admitted at a reduction of 50 per cent from the customs tariffs now in force:

Bacon and bacon hams, bread and biscuit, cheese, lard and its compounds, and mules.

The following articles will be admitted at a reduction of 25 per cent from the tariffs now in force:

Beef, salted or pickled; corn, corn meal, wheat flour; pork, salted or pickled; wheat.

In the case of wheat flour it is stipulated that the 25 per cent provision shall not apply in Trinidad, but that it shall not bear a duty to exceed 75 cents per barrel.

AGRICULTURAL EXPORTS.

Articles.	Value.	Articles.	Value.
Live animals:		Provisions—Continued.	
Horses.....	\$300	Pickled pork	\$157,857
Mules.....	24,170	Lard.....	26,582
Cattle.....		Butter.....	17,833
All other animals and fowls	12,321	Cheese.....	27,385
Total	36,791	All other provisions.....	27,902
Breadstuffs:		Total	360,060
Bread and biscuit	14,802	Miscellaneous:	
Corn.....	30,382	Apples, green or ripe.....	3,494
Corn meal.....	24,361	Canned fruits	1,195
Wheat.....		Cotton-seed oil.....	10,122
Wheat flour	704,264	Tobacco, leaf.....	42,996
All other breadstuffs.....	10,930	Beans }	20,584
Total	784,739	Peas }	1,530
Provisions:		Potatoes.....	36,590
Canned beef	1,772	All other agricultural exports.....	
Salted beef.....	67,282	Total agricultural exports.....	1,208,110
Tallow.....	13,236	Total nonagricultural exports ..	463,240
Bacon.....	10,924	Total exports.....	1,761,350
Hams.....	9,236		

AGRICULTURAL IMPORTS.

Articles.	Value.	Articles.	Value.
FREE OF DUTY.		DUTIABLE.	
Agricultural products:		Fruits, including nuts.....	\$25
Live animals.....	\$10	Sugar.....	3,892,602
Cocoa, crude, and leaves and shells of.....	197	Total agricultural imports dutiable.....	3,892,627
Fruits, including nuts.....	200	Total nonagricultural imports dutiable.....	12,920
Sugar.....	973,470	Total imports dutiable.....	3,905,547
Total agricultural imports free.....	973,877	Total imports free	977,659
Total nonagricultural imports free.....	3,782	Grand total of imports.....	4,883,206
Total imports free of duty.....	977,659		

In 1891 our agricultural imports from British Guiana amounted to \$4,866,504, and, with the exception of sugar, only \$25 of this paid any duty to our Government. A free market was furnished for all products sold us. Our exports of farm products amounted to \$1,298,110, and we paid duties on nearly everything. This inequality in trade relations is corrected by the arrangement entered into for this and other English colonies. Our principal items of export for 1891, with the reciprocity provisions regarding them, are shown:

	Value.	Per cent off regular duties.
Flour	\$704,264	25
Pickled pork.....	157,857	25
Salted beef.....	67,282	25
Bacon and hams.....	20,160	50
Cheese.....	27,962	50
Lard.....	26,582	50

These concessions showed result in reducing the balance of trade heretofore so strongly against us.

COURSE OF COMMERCIAL PRICES.

Markets and items.	Unit of measure.	1891.				1892.
		January 2.	April 1.	July 1.	October 1.	January 2.
Portland, Me.:						
Corn.....	Bushel	\$0.69 - \$0.70	\$0.87 - \$0.88	\$0.73 - \$0.74	\$0.80 - \$0.81	\$0.69 - \$0.70
Oats.....	do	.56 - .57	.65 - .68	.57 - .59	.45 - .46	.47 - .50
Potatoes.....	do	.90 - 1.00	.90 - 1.00	1.10 - 1.20	.45 - .60	.45 - .50
Hay, loose.....	Ton	12.00 - 14.00	12.00 - 11.00	12.00 - 14.00	10.00 - 12.00	10.00 - 12.00
Butter, creamery.....	Pound	.25 - .28	.23 - .25	.25 - .28	.25 - .28	.28 - .32
Cheese, sage.....	do	.124 - .134	.13 - .14	.114 - .124	.114 - .124	.124 - .14
Eggs.....	Dozen	.29 - .30	.16 - .18	.18 - .19	.20 - .22	.27 - .30
Lard, keg.....	Pound	.07 - .104	.07 - .104	.074 - .104	.074 - .104	.07 - .10
Wool, fleece, washed.....	do	.25 - .35	.25 - .35	.25 - .35	.25 - .35	.25 - .35
Boston, Mass.:						
Corn, No. 2 mixed.....	Bushel	.644	.83	.68	.67 - .68	.54
Oats, No. 2 white.....	do	.554	.63 - .634	.48	.37 - .374	.41 - .44
Rye.....	do	.78 - .80	1.00	.95 - .97	1.00	.95
Barley, 2-rowed State.....	do	.85 - .88	.85 - .88			.70 - .73
Potatoes, Houlton.....	do	1.05 - 1.08	1.15 - 1.20		.45	.50
Hay, fair to good.....	Ton	13.00 - 14.00	12.00 - 12.50	14.00 - 15.00	15.00 - 16.00	16.00 - 17.00
Butter, extra dairy.....	Pound	.24 - .25	.25 - .26	.18 - .19	.23 - .24	.27 - .28
Cheese, Vermont, extra.....	do	.094 - .10	.114 - .12	.08	.094 - .10	.114 - .114
Eggs, Eastern extras.....	Dozen	.28	.22	.18	.22	.27
Lard, city rendered.....	Pound	.064 - .064	.074	.064 - .07	.074	.064 - .07
New York, N. Y.:						
Wheat, No. 2 winter.....	Bushel	1.044 - 1.054	1.17 - 1.18	1.034 - 1.044	1.034 - 1.044	1.064 - 1.074
Corn, No. 2 mixed.....	do	.614	.80	.60	.614	.534 - .54
Oats, No. 2 mixed.....	do	.494 - .494	.50	.39 - .40	.33 - .334	.394 - .394
Rye, State.....	do	.78 - .80	.96	.85 - .90	.93 - .95	1.00 - 1.02
Barley, 2-rowed State.....	do	.83 - .85	.80			.64 - .65
Pork, prime mess.....	Barrel	11.50 - 12.00	13.00 - 13.50	11.50 - 12.00	11.50 - 12.00	9.00 - 10.00
Butter, State dairy.....	Pound	.23 - .25	.28	.18	.224 - .23	.24 - .25
Cheese, State factory.....	do	.094		.084 - .084	.094 - .094	.114 - .114
Eggs.....	Dozen			.174 - .18	.22	.27
Hay.....	100 lbs.	.55 - .65	.60 - .70	.95 - 1.00	.80 - .90	.85 - .90
Tobacco, Connecticut leaf.....	Pound	.11 - .23	.11 - .23	.11 - .23	.16 - .30	.16 - .30
Tobacco, Virginia wrapper.....	do	.10 - .23	.10 - .23	.10 - .23	.15 - .25	.15 - .25
Philadelphia, Pa.:						
Wheat, winter.....	Bushel	1.04	1.10	1.05	1.014	1.004
Corn, No. 2 mixed.....	do	.60	.784	.684	.66	.52
Oats, No. 2 white.....	do	.504	.604	.45	.36	.41
Hay, timothy.....	Ton	10.50	11.00	13.50	14.50	14.50
Baltimore, Md.:						
Wheat, No. 2 red winter.....	Bushel	.96	1.104	1.004	1.02	1.024
Corn, mixed.....	do	.574	.734	.65	.644	.524
Oats, No. 2 white.....	do	.50	.62 - .624	.42	.36 - .37	.40
Rye, No. 2.....	do	.80	.97 - .98	.75	.93 - .94	.944 - .95
Hay, timothy.....	Ton	9.50 - 11.00	10.00 - 10.50	11.50 - 12.00	12.50 - 13.50	12.50 - 13.50
Wool, tub-washed, fair to choice.....	Pound	.32 - .35	.32 - .35	.30 - .33	.30 - .33	.32 - .33
Atlanta, Ga.:						
Corn, white.....	Bushel	.75	.90	.83	.82	.58
Oats, No. 2 mixed.....	do	.59	.67	.56	.44	.46
Potatoes.....	Barrel	3.75	4.50	4.00 - 5.00	2.25 - 2.50	2.00
Hay.....	Cwt	.90	.95	.85	.95	.95
Beef, dressed.....	Pound	.06	.054	.06 - .07	.084	.054
Cotton.....	do	.084	.084	.074	.084	.07
Eggs.....	Dozen	.26	.13	.13	.19 - .21	.25
New Orleans, La.:						
Corn, No. 2 white.....	Bushel	.64	.83	.80	.68 - .69	.56
Oats, No. 2.....	do	.54	.62	.51 - .52	.374	.42
Hay, prime.....	Ton	14.00 - 15.50	15.50 - 16.00	17.00 - 18.00	13.50 - 15.00	15.00 - 16.00
Pork.....	Barrel	9.75	13.50	11.50 - 12.00	12.00 - 12.25	9.50
Cincinnati, Ohio:						
Wheat, No. 2 red, winter.....	Bushel	.96 - .97	1.064 - 1.07	.98 - 1.00	.97 - .974	.95 - .96
Corn, No. 2 mixed.....	do	.524	.73 - .734	.60 - .61	.57	.43
Oats, No. 2 mixed.....	do	.434 - .44	.574 - .58	.41 - .414	.304 - .314	.344 - .344
Rye, No. 2.....	do	.734 - .74	.92	.85	.88	.92 - .93
Potatoes.....	do	.95 - 1.00	1.15 - 1.25		.35 - .40	.30 - .35
Hay, timothy.....	Ton	9.00 - 9.50	10.00 - 10.50	10.00 - 11.00	9.50 - 10.00	11.00 - 11.50
Pork, mess.....	Barrel	10.00 - 10.124	12.374 - 12.50	10.70 - 10.624	10.50	8.50 - 8.75
Butter, fancy cream.....	Pound	.30 - .31	.30 - .31	.19 - .20	.26	.39
Cheese, Ohio factory.....	do	.09 - .094	.11 - .114	.07 - .08	.09 - .094	.11 - .114
Eggs.....	Dozen	.20	.15	.13 - .134	.17	.18

COURSE OF COMMERCIAL PRICES—Continued.

Markets and items.	Unit of measure.	1891.				1892.
		January 2.	April 1.	July 1.	October 1.	January 2.
Chicago, Ill.:						
Wheat, No. 2 red, winter	Bushel	\$0.88-0.89	\$1.05	\$0.92-0.93	\$0.95-0.95	\$0.90
Corn, No. 2	do	.48- .49	\$0.67- .67	.58- .59	.52- .53	.37-0.38
Oats, No. 2	do	.42- .42	.54- .54	.33- .33	.26- .27	.30- .30
Rye, No. 2	do		.88- .88	.72- .72	.83- .83	.86- .87
Hay, No. 1 timothy	Ton	9.00-9.75	14.00-15.00	13.00-14.00	10.50-11.00	12.50-13.50
Beef, extra mess.	Barrel	5.50-5.75	6.75-7.00	8.25-8.50	6.00-6.50	5.50-5.75
Pork, mess	do	10.20-10.25	12.50-12.62	10.00-10.12	9.87-10.00	10.37-10.50
Eggs	Dozen	.22	.16- .16	.14- .15	.18- .18	.23- .24
Milwaukee, Wis.						
Wheat, No. 2 spring	Bushel	.83	.99	.87- .88	.89	.84
Corn, No. 3	do	.47- .48	.70	.57- .57	.53	.37
Oats, No. 2 white	do	.42- .43	.55- .55	.39	.30- .31	.32- .32
Barley, No. 2	do	.66	.72	.68	.66	.57
Rye, No. 1	do	.67	.88	.79	.84- .84	.86
Potatoes	do	.75-1.00	.90-1.10	.50- .80	.25- .35	.20- .35
Hay, timothy	Ton	8.00-8.50	12.50-13.00	14.50-15.50	12.00-12.50	13.50-14.50
Pork, mess	Barrel	10.25	12.45	10.10	9.85	7.75
Beef, extra mess	do	6.25	7.50	8.50	6.50	6.25
Butter, creamery	Pound	.21- .25	.25- .26	.15- .16	.23- .25	.24- .26
Cheese, Wisconsin	do	.09- .10	.09- .14	.07- .12	.09- .11	.10- .12
Wool, washed	do	.25- .26	.25- .26	.22- .24	.23- .24	.24- .25
St. Louis, Mo.:						
Wheat, No. 2 red, winter	Bushel	0.92-0.93	1.01-1.04	0.87-0.89	0.93-0.93	0.90-0.90
Corn, No. 2	do	.47- .48	.64- .65	.55- .55	.53	.36- .36
Oats, No. 2	do	.42- .43	.53- .53	.34- .34	.27- .27	.31- .31
Rye, No. 2	do	.62- .63	.88- .90	.85	.81	.82
Potatoes, choice	do	.95-1.10	1.00-1.05	.70- .80	.38- .40	.30
Hay, timothy	Ton	12.00-13.00	15.50-16.50	16.00	12.00	13.00
Beef, family	Barrel	10.25	6.50	10.50	9.50	7.50
Pork, mess	do	10.37-10.50	12.25-12.50	10.50	10.75	10.50
Lard, prime steam	Pound	.05- .05	.06- .06	.05- .05	.08- .08	.05
Eggs	Dozen	.18	.14	.11	.16	.18
Tobacco, Missouri:						
burley	100 lbs.	5.00-6.50	5.00-6.50	5.00-7.00	5.00-7.00	5.50-6.50
Wool, tub-washed, fair	Pound	.30- .32	.30- .32	.26- .27	.28- .30	.28- .30
San Francisco, Cal.:						
Wheat, No. 1, white	Cental	1.35	1.53-1.55	1.52	1.67-1.68	1.80-1.81
Barley, No. 2, brewing	do	1.52-1.55	1.42-1.42	1.55	1.11-1.13	1.12-1.15
Oats, No. 2	do	1.82-1.85	1.70-1.70	1.60	1.32-1.33	1.30-1.32
Corn, No. 1, white	do	1.32-1.35	1.40-1.42	2.20	1.37-1.40	1.35-1.37
Rye, No. 1	do	1.32-1.35	1.32	1.30	1.60-1.62	1.67-1.70
Potatoes	do	.90-1.15	.70-1.00	.50- .75	.35- .60	.30- .65
Hay, No. 1, oats	Ton	13.00-14.50	14.00-16.00	11.00-12.00	11.00-12.00	13.50-14.50
Butter, good to choice	Pound	.32- .36	.19- .20	.19- .21	.25- .20	.32- .33
Cheese	do	.11- .13	.11- .12	.09- .09	.11- .12	.12- .13
Eggs, choice	Dozen	.30- .32	.18- .22	.20- .23	.32- .35	.40- .42
Wool, Oregon Valley	Pound	.20- .22			.19- .21	

TRANSPORTATION RATES.

In compliance with requirement of Congress, there have been published in each monthly crop report during the past year statements showing the rates of freight upon agricultural products, via rail and water, from the more important points of shipment to large market centers in all parts of the country. These reports have also contained tabular statements showing the cost of transportation to foreign countries. The rates published were those in effect upon the first day of each month.

The rates between New York and Chicago have been remarkably steady throughout the year. No changes were reported in West-bound rates, and only one in East-bound. On the 1st of May the returns showed an advance of 2 cents per 100 pounds upon cattle in carload lots, or from 26 to 28 cents, with the usual differences to other Eastern markets.

The returns from companies doing business between Missouri River points and Chicago show that the rates in that territory were also very uniform during the year. Only one change is reported in the rates from Kansas City, Atchison, or St. Joseph to Chicago, which was an increase, November 1, of 3 cents per 100 pounds upon live hogs in car-load lots. From Omaha to Chicago no change was reported during the year. From these Missouri River points to St. Louis the rates remained the same throughout the year, with the exception of those upon live stock. January 1 the rates upon cattle, sheep, and hogs were 14½, 15½, and 15 cents per 100 pounds, respectively; May 1 they were advanced to 20, 21½, and 18½ cents; September 1 reduced to the January 1 rates, and November 1 they were increased to 20, 21½, and 21½ cents.

The average rates for the year were higher than they were for 1890. The average upon corn and wheat, Chicago to New York, shows the advance. The average rate on corn for 1890 was about 11½ cents per bushel, while for 1891 it was about 15 cents. The rate on wheat for 1890 was about 14½ cents, and for 1891 about 15 cents. These figures show an increase of 3½ cents on corn, and two-thirds of a cent on wheat.

The following statement shows the all-rail rate from Chicago to New York from 1870 to 1891:

Years.	Chicago to New York.			
	Corn per bushel.		Wheat per bushel.	
	Average rate.	Per cent of decrease.	Average rate.	Per cent of decrease.
	<i>Cents.</i>		<i>Cents.</i>	
1870.....	28.00		30.00	
1871.....	29.68	*6.0	31.85	*6.4
1872.....	32.66	*16.6	34.99	*16.6
1873.....	28.93	*3.3	31.02	*12.4
1874.....	24.50	12.5	26.25	12.5
1875.....	22.40	20.0	24.00	20.0
1876.....	15.74	43.8	16.86	43.8
1877.....	18.90	32.5	20.50	31.7
1878.....	16.52	41.0	17.70	41.9
1879.....	14.56	48.0	17.74	46.0
1880.....	17.48	37.6	19.86	34.0
1881.....	13.40	52.1	14.40	52.8
1882.....	13.50	51.8	14.47	51.3
1883.....	15.12	46.0	16.29	46.0
1884.....	12.32	56.0	13.20	56.0
1885.....	12.32	56.0	13.20	56.0
1886.....	14.00	50.0	15.00	50.0
1887.....	14.70	47.5	15.75	47.5
1888.....	15.54	51.6	14.50	53.7
1889.....	12.82	54.2	15.00	50.0
1890.....	111.31	59.6	114.37	52.1
1891.....	115.00	48.4	115.00	50.0

* Increase. † Straight average.

TRANSATLANTIC RATES.

The average cost for transporting our surplus farm products to foreign countries for the year 1891 was much higher than for 1890. During the first six months of the year 1890 the rates were rather high, and the average rate upon wheat and corn from New York to Liverpool was nearly 8 cents per bushel, while the average rate for the last half of the year was only about 4½ cents. For 1891 the situation was reversed, the average for the first half of the year being about 4½ cents and for the last half about 8½ cents. The average rate for the year 1890 was nearly 6 cents and for 1891 nearly 7 cents.

The following statement shows the average monthly cost for transporting several of the most important articles of export from New York

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to Liverpool for the two years 1890 and 1891, as compiled from the returns of the leading steamship companies:

Articles.	January.		February.		March.		April.	
	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.
Wheat..... per bushel..	\$0.11	\$0.06	\$0.11	\$0.07	\$0.10	\$0.04	\$0.07	\$0.04
Corn..... do.....	.11	.06	.11	.07	.10	.04	.07	.04
Flour..... per barrel..	.72	.48	.72	.54	.72	.36	.60	.36
Bacon..... per 2,240 pounds..	7.80	4.80	8.40	6.00	7.20	4.80	7.20	3.60
Lard..... do.....	7.80	4.80	8.40	5.40	6.60	4.20	5.40	3.00
Beef..... per tierce..	1.44	.96	1.44	.96	1.32	.72	1.08	.60
Pork..... per barrel..	.96	.60	.96	.72	.84	.48	.84	.42
Cotton..... per pound..	.00 $\frac{7}{8}$	.00 $\frac{1}{2}$	.00 $\frac{1}{2}$	.00 $\frac{1}{4}$	.00 $\frac{7}{8}$	.00 $\frac{1}{2}$	.00 $\frac{1}{2}$	.00 $\frac{1}{4}$
Apples..... per barrel..	.72	.48	.72	.60	.72	.60	.72	.60
Butter..... per 2,240 pounds..	9.60	7.20	10.80	8.40	9.60	7.20	8.40	6.00

Articles.	May.		June.		July.		August.	
	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.
Wheat..... per bushel..	\$0.04	\$0.04	\$0.04	\$0.04	\$0.05	\$0.05	\$0.05 $\frac{1}{2}$	\$0.06
Corn..... do.....	.04	.04	.04	.04	.05	.05	.05 $\frac{1}{2}$	.06
Flour..... per barrel..	.36	.36	.36	.36	.36	.36	.36	.36
Bacon..... per 2,240 pounds..	3.60	2.40	3.00	2.40	3.60	3.60	3.00	3.60
Lard..... do.....	3.00	2.40	3.00	2.40	3.00	3.00	3.00	3.60
Beef..... per tierce..	.60	.42	.48	.48	.60	.60	.48	.60
Pork..... per barrel..	.48	.30	.36	.30	.48	.42	.36	.42
Cotton..... per pound..	.00 $\frac{7}{8}$	.00 $\frac{1}{2}$	.00 $\frac{7}{8}$	.00 $\frac{1}{2}$	.00 $\frac{7}{8}$	.00 $\frac{1}{2}$	.00 $\frac{1}{2}$	.00 $\frac{1}{4}$
Apples..... per barrel..	.72	.60	.48	.60	.60	.60	.72	.60
Butter..... per 2,240 pounds..	7.20	6.00	7.20	7.20	8.40	7.20	6.00	8.40

Articles.	September.		October.		November.		December.	
	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.
Wheat..... per bushel..	\$0.03	\$0.08	\$0.03	\$0.10	\$0.03	\$0.12	\$0.06	\$0.12
Corn..... do.....	.03	.08	.03	.10	.03	.12	.06	.12
Flour..... per barrel..	.24	.48	.24	.60	.36	.72	.48	.72
Bacon..... per 2,240 pounds..	2.40	4.80	2.40	6.00	2.40	7.20	4.80	8.40
Lard..... do.....	2.40	4.80	2.40	6.00	2.40	7.20	4.20	8.40
Beef..... per tierce..	.48	.84	.48	.96	.48	1.32	.72	1.44
Pork..... per barrel..	.36	.60	.25	.72	.36	.96	.48	.96
Cotton..... per pound..	.00 $\frac{1}{2}$	.00 $\frac{1}{2}$	.00 $\frac{1}{2}$	.00 $\frac{1}{2}$	.00 $\frac{1}{2}$	.00 $\frac{1}{2}$	.00 $\frac{1}{2}$	.00 $\frac{1}{2}$
Apples..... per barrel..	.60	.60	.60	.60	.48	.72	.48	.72
Butter..... per 2,240 pounds..	7.20	8.40	7.20	8.40	6.00	10.80	7.20	10.80

Although the foregoing statement shows that the rates have increased during the past year, still they are much lower than they were a few years ago. The average rate upon wheat for this year, New York to Liverpool, is about 6.84 cents per bushel, or about one-third the rate for 1873, which was 21.12 cents. It is only 43.8 per cent of the average rate for the decade 1870 to 1879, which was 15.61 cents. For the next decade, 1880 to 1889, the average rate was 7.65 cents, of which this year's rate is 89.4 per cent.

The following statement shows the yearly average rate upon wheat per bushel from New York to Liverpool for the years 1866 to 1891, inclusive:

Years.		Steamer rates.		Years.		Steamer rates.	
		Pence.	Cents.			Pence.	Cents.
1866.....		4.74	9.48	1879.....		6.20	12.40
1867.....		5.18	10.36	1880.....		5.88	11.76
1868.....		7.18	14.36	1881.....		4.08	8.16
1869.....		6.40	12.98	1882.....		3.87	7.74
1870.....		5.78	11.56	1883.....		4.54	9.08
1871.....		8.16	16.32	1884.....		3.40	6.80
1872.....		7.64	15.28	1885.....		3.60	7.20
1873.....		10.56	21.12	1886.....		3.40	6.92
1874.....		9.08	18.16	1887.....		2.71	5.42
1875.....		8.07	16.14	1888.....		2.67	5.34
1876.....		8.02	16.04	1889.....		4.06	8.12
1877.....		8.03	13.86	1890.....		*2.98	*5.92
1878.....		7.61	15.22	1891.....		*3.42	*6.84

*Straight average.

THE ERIE CANAL.

All things considered, the past season of navigation via this great water route, Buffalo to New York, must have been one of activity and prosperity. The season was longer by one day than that of 1890, and for the period the rates were higher. During the first half of the season, or from May 5 to August 15, the rates were lower than for the same time during the previous season, but from that date to the close of navigation, the time when the two great crops, wheat and corn, were being moved from the West to the seaboard, they were considerably higher. The same may be said of the lake rates, Chicago to Buffalo. The first half of the season the rates were low, while during the latter half they were comparatively high.

The following statement shows the weekly range of the rates upon wheat and corn, Chicago to Buffalo via lake, Buffalo to New York via Erie Canal, and the through rates, Chicago to New York, less the transfer charges at Buffalo:

[In cents per bushel.]

Week ending—		Lake—Chicago to Buffalo.						Erie Canal— Buffalo to New York.						Lake and canal— Chicago to New York.					
		1889.		1890.		1891.		1889.		1890.		1891.		1889.		1890.		1891.	
		Wheat.	Corn.	Wheat.	Corn.	Wheat.	Corn.	Wheat.	Corn.	Wheat.	Corn.	Wheat.	Corn.	Wheat.	Corn.	Wheat.	Corn.	Wheat.	Corn.
May	10.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	17.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	24.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	31.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
June	7.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	14.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	21.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	28.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
July	5.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	12.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	19.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	26.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
August	2.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	9.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	16.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	23.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
September	30.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	7.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	14.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	21.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
October	28.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	5.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	12.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	19.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
November	26.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	3.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	10.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31
	17.....	21	12	19	14	22	14	4	35	4	32	12	21	61	54	52	54	44	31

REPORT OF THE CHIEF OF THE DIVISION OF VEGETABLE PATHOLOGY.

* * * * *

TREATMENT OF GRAPE DISEASES.

The treatment of grape diseases was confined entirely to one vineyard near Sterling, Va., 30 miles southwest of Washington, on the Richmond and Danville Railroad. This vineyard was selected for a number of reasons, the first being its proximity to headquarters; second, the crop

had for a number of years been almost totally destroyed by rot and mildew; and, third, that it had received every attention in the way of pruning, cultivation of the soil, etc. The owner of the property, Mr. John A. Svedberg, kindly placed the entire vineyard at our disposal, and in many other ways aided materially in the work.

The experiments were designed to throw light on the following points, none of which, so far as known, had been subjected to trials of this kind before:

(1) A comparison of eight fungicides, each depositing on the foliage approximately the same amount of the compound of copper as the ammoniacal copper carbonate solution, viz., .1 ounce per gallon.

(2) A comparison of two fungicides of same strength as (1), but containing no copper, with the foregoing preparations.

(3) A comparison of the Bordeaux mixture full strength with half strength, and early treatments with late.

The fungicides used under (1) and (2) were as follows:

1. AMMONIACAL COPPER CARBONATE SOLUTION.

Copper carbonate.....	ounces..	$\frac{1}{4}$
Aqua ammonia (26°).....	do....	6
Water.....	gallons..	$4\frac{1}{2}$

2. MODIFIED EAU CELESTE.

Copper sulphate.....	ounces..	$2\frac{1}{2}$
Sodium carbonate, cryst.....	do....	3
Aqua ammonia (26°).....	do....	2
Water.....	gallons..	$6\frac{1}{2}$

3. PRECIPITATED COPPER CARBONATE SOLUTION.

Copper sulphate.....	ounces..	$2\frac{1}{2}$
Sodium carbonate, cryst.....	do....	3
Water.....	gallons..	$6\frac{1}{2}$

4. COPPER SACCHARATE.

Copper sulphate.....	ounces..	$2\frac{1}{2}$
Sodium carbonate, cryst.....	do....	3
Cheap molasses.....	do....	2
Water.....	gallons..	$6\frac{1}{2}$

5. GLUE MIXTURE.

Copper sulphate.....	ounces..	$2\frac{1}{2}$
Sodium carbonate, cryst.....	do....	3
Le Pagés liquid glue.....	do....	2
Water.....	gallons..	$6\frac{1}{2}$

6. BORDEAUX MIXTURE.

Copper sulphate.....	ounces..	4
Lime, fresh.....	do....	4
Water.....	gallons..	$7\frac{1}{2}$

7. COPPER ACETATE SOLUTION.

Copper acetate, basic.....	ounces..	$\frac{1}{4}$
Water.....	gallons..	5

8. COPPER CHLORIDE MIXTURE.

Copper sulphate.....	ounces..	$\frac{1}{4}$
Calcium chloride.....	do....	$\frac{1}{4}$
Water.....	gallons..	5

9. POTASSIUM SULPHIDE SOLUTION.

Potassium sulphide.....	ounces..	1
Water.....	gallons..	5

10. SODIUM HYPOSULPHITE SOLUTION.

Sodium hyposulphite.....	ounces..	1
Water.....	gallons..	5

For the comparative experiments with Bordeaux mixture, as outlined under (3), the following formulas were used:

1. BORDEAUX MIXTURE, FULL STRENGTH.

Copper sulphate.....	pounds..	6
Lime, fresh.....	do.....	4
Water.....	gallons..	22

2. BORDEAUX MIXTURE, HALF STRENGTH.

Copper sulphate.....	pounds..	3
Lime, fresh.....	do.....	2
Water.....	gallons..	22

In view of the fact that the ammoniacal solution of copper carbonate has proved one of the cheapest and best fungicides, it was thought desirable to place the others on an equal footing with it. The vines selected for this work were Concords eight years old, which were trained to stakes 8 feet high, set 6 feet apart each way. Seven hundred and fifty vines were selected for the experiment, 200 of which were treated, and the remainder, 350, left for control. Each treated plat of twenty vines was almost wholly surrounded by untreated ones, thus affording a most severe test for the experiment. All the plats received seven sprayings, each being given on the same day. The first spraying was made on April 27, when the leaves were from 1 to 1½ inches in diameter. The second and third sprayings were made on May 13 and 25, respectively, just as fruit was forming. After this, sprayings were made every ten or twelve days until the fruit showed signs of ripening.

TREATMENT OF BLACK ROT OF SWEET POTATOES.

Experiments in the treatment of sweet-potato black rot were carried on at Penn's Grove, N. J., in coöperation with Dr. B. D. Halsted, of the New Jersey Experiment Station.

The work was planned to throw light upon the following points:

- (1) The influence of healthy and diseased seed potatoes upon the amount of black rot.
- (2) The effect of treating healthy and diseased seed potatoes with a fungicide before planting.
- (3) The effect of treating the sprouts from healthy and diseased seed-potatoes with a fungicide while in the propagating bed.
- (4) The effect of spraying diseased and healthy sprouts with a fungicide from the time of planting in the field until the runners had attained a length of 2 feet.
- (5) The effect of treating potatoes previous to storing with four different fungicides, to prevent the spread of black rot in the bin.

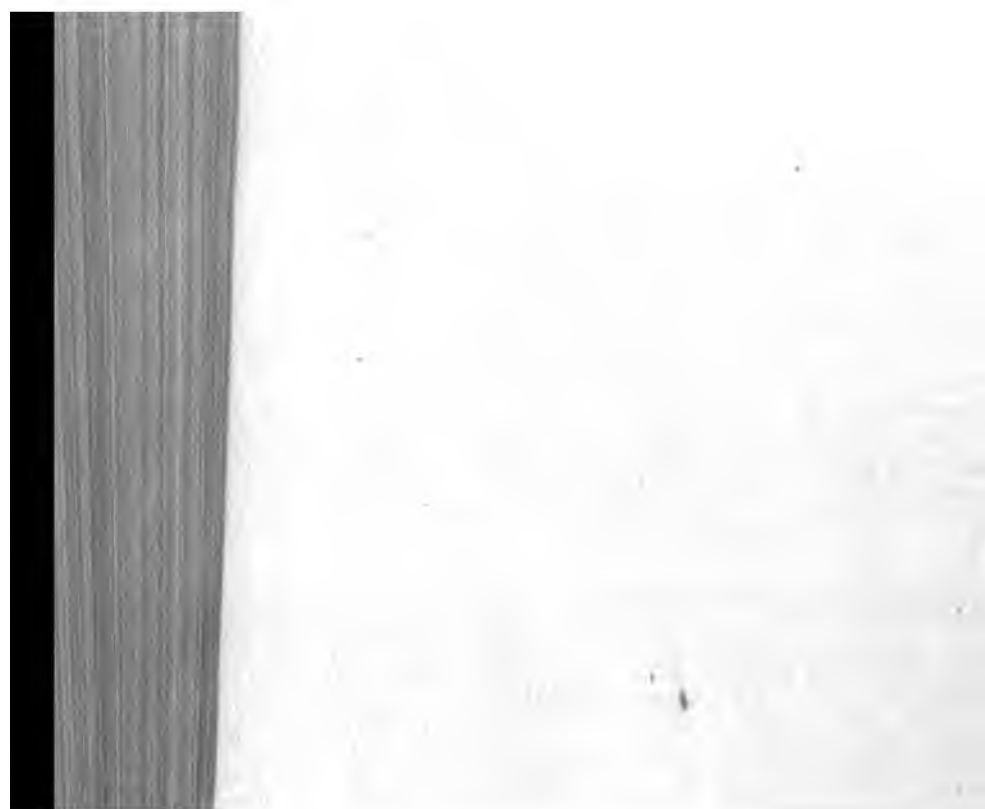
The unusual absence of the disease in the field experimented with rendered the results negative in some points. It is hoped, however, that the continuation of the experiments will furnish valuable suggestions to potato-growers. Even at this stage of the experiment the wisdom of planting perfectly healthy seed and transferring to the field only healthy sprouts has been clearly demonstrated.

TREATMENT OF OAT BLIGHT.

In the experiment having in view the prevention of oat blight, to which reference has been made under "Laboratory Investigations," the work was confined mainly to the planting of seed from infested and non-infested regions. An effort was also made to determine the effect of early and late planting on the disease. An acre of oats consisting of sixteen plats, planted so as to cover the foregoing points, was sown near Washington. Two acres planted in a similar manner were under observation in Pennsylvania. Prof. J. H. Fletcher, of the Central Experiment Farm at Ottawa, Canada, also kindly planted a number of plats with seed sent from this country.

As stated elsewhere, no blight whatever appeared, and such being the case, the results were wholly negative.

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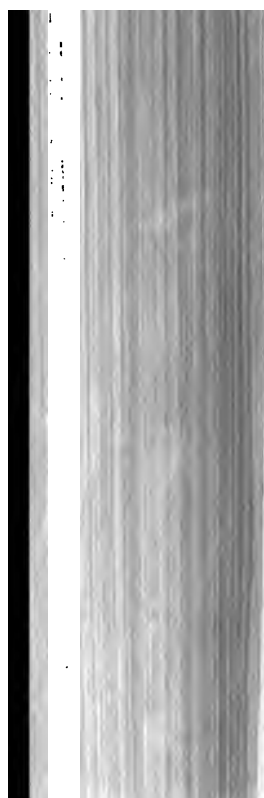
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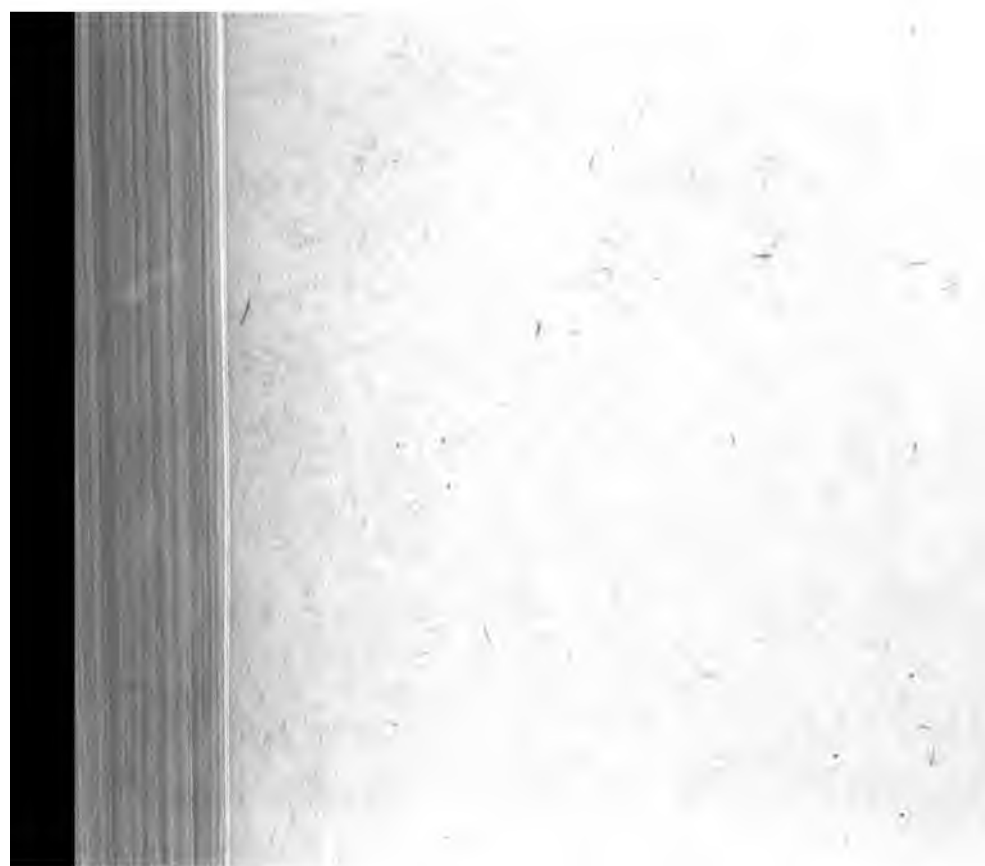
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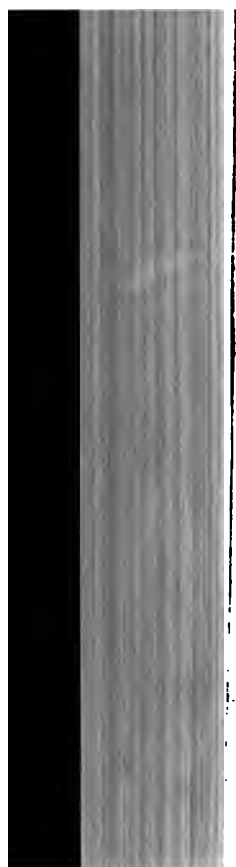












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